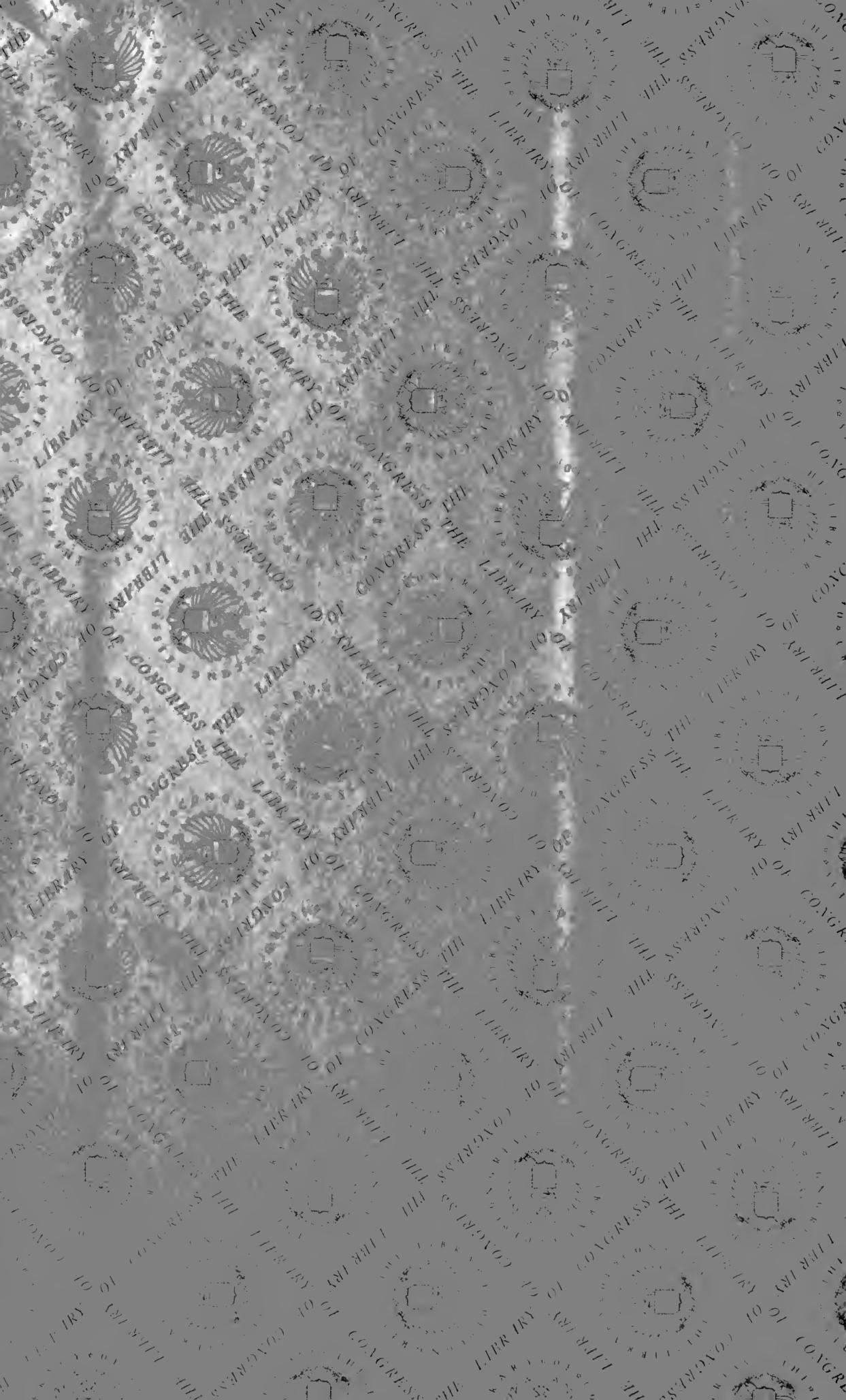
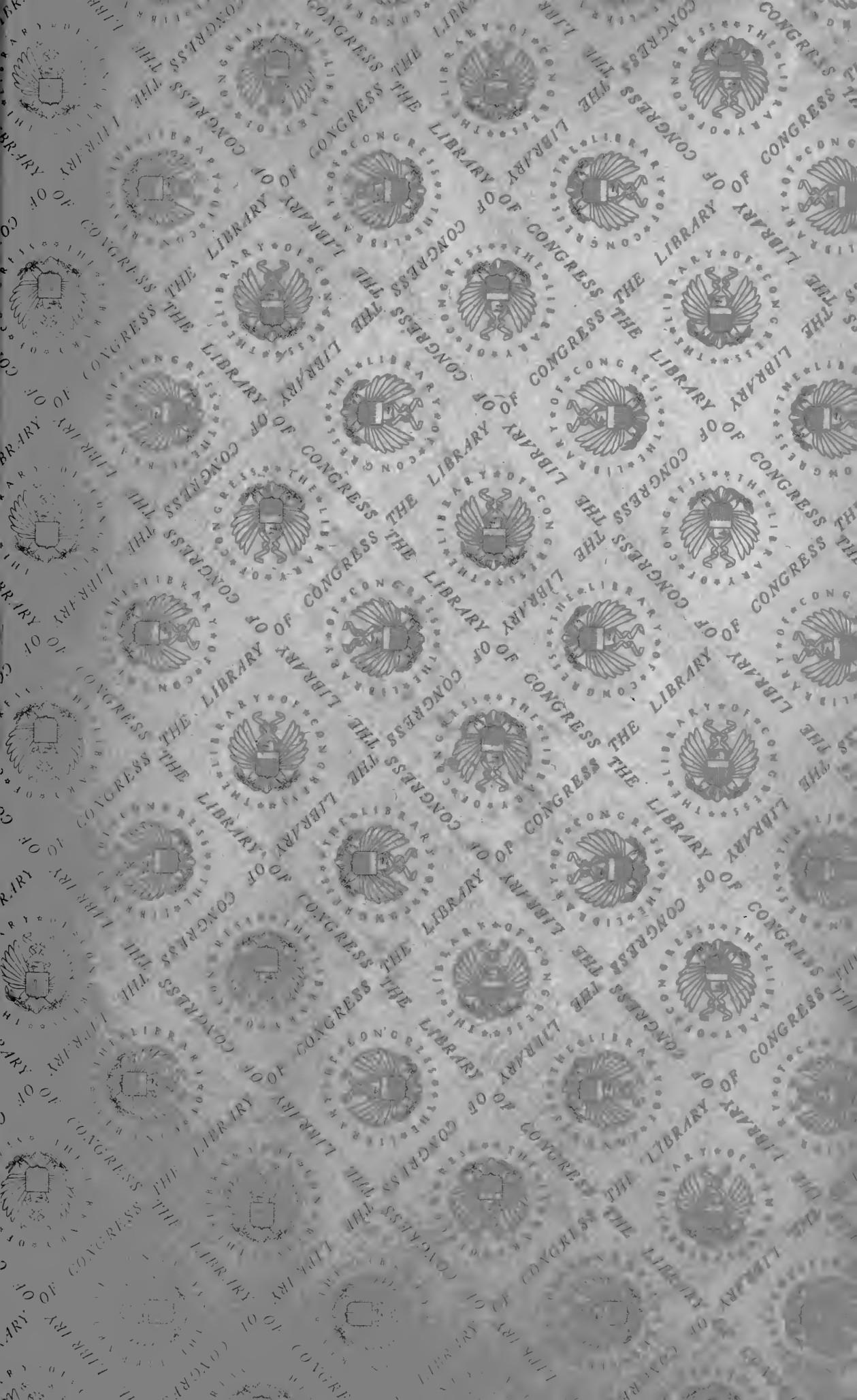


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A U S T R A L I A :

BEING

A BRIEF COMPENDIUM OF THE GEOGRAPHICAL POSITION, TOPOGRAPHY, CHARACTERISTIC FEATURES, DESCRIPTION OF THE PRINCIPAL RIVERS, HEADLANDS, PRODUCTIONS, CLIMATE, SAILING DIRECTIONS, ETC., ETC.;

THE WHOLE FORMING

A COMPLETE HAND-BOOK OR GUIDE TO THE GOLD REGIONS:

INTENDED FOR THE USE OF

MERCHANTS, SHIPMASTERS, INTENDENT EMIGRANTS, AND OTHERS.

TO WHICH IS APPENDED

A VALUABLE COLLECTION OF TABLES,
COMPILED FROM AUTHENTIC SOURCES,

SHOWING

THE RATE OF HARBOR DUES, CUSTOMS TARIFF, PILOT AND TONNAGE DUES, PUBLIC OFFICERS' FEES, LICENSES, TOLLS, REGULATIONS FOR THE GOLD REGIONS, ETC., ETC.



BY

BENTHAM FABIAN.

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P R E F A C E .

THE aim which I have had in view in compiling these pages, has been to supply a want which I have frequently heard expressed in my intercourse with persons interested in the increasing traffic with the New World; and to supply this, in accordance with the spirit of the age, the chief point I have endeavored to attain is—utility.

Though for a period of several years a continuous flood of emigration from the Mother Country has been pouring into this British Colony, very little was really known by the public here, or even in Europe, as to its extent and capabilities, till the discovery of the glittering ore, that universal magnet, drew the attention of all to the subject, when the idea burst upon them as that of a new-found world.

So much was this the case, that I have been frequently asked by persons having resolved to go there, to what works I could refer them from which they could obtain reliable information on the topics I have endeavored to comprise in this little work. Though I have borrowed from others also, I have been mainly indebted to the larger work on the British Colonies, by H. Montgomery Martin, Esq., an able and impartial writer, whose statements are looked upon in Europe as indubitable authorities.

To confine the useful information within the limits of the Hand-Book, I have been compelled to abandon much interesting matter, which I had collected in the nature of an historical account of the Settlement, and merely to present Australia as it is, with the prospects it holds out to the emigrant, be his object Gold-seeking, Commerce, or Agriculture.

To the many Shipmasters from these shores who will within the next few years visit those of a totally new country, much of the information, it is hoped, will be found very valuable, particularly the Tables of Dues, &c.; while to my compeers engaged in commerce with that quarter of the world, I trust the book may prove useful, if it is only by referring those to it who, as in my own case, are perpetually asking information.

As I simply claim the merit of compiling and condensing authentic facts and figures, if any of these purposes are answered, the full end and aim will be accomplished, of their most humble servant,

BENTHAM FABIAN, *Editor.*

NEW-YORK, *August*, 1852.

A U S T R A L I A.

CHAPTER I.

GEOGRAPHICAL POSITION.—EXTENT.—TOPOGRAPHICAL DESCRIPTION.—RIVERS,
HEADLANDS, ETC.

AUSTRALIA or NEW HOLLAND, which is by far the largest Island in the world, forms the principal portion of the British possessions in Australasia: those possessions comprising in addition Van Diemen's Land, New Zealand, and some lesser Islands in the Pacific.

The one of which we have alone to speak contains the colonies of New South Wales, on the eastern side, (so called from a fancied resemblance to South Wales, in Great Britain,) founded in 1787, as a penal settlement; Western Australia, or Swan River, founded in 1829—1830; South Australia, or Port Adelaide, founded in 1835—1836; and Port Philip, or Victoria, lying to the south-eastern point of the Island, founded in 1836.

It is in the adjoining colonies of New South Wales and Port Philip, that the extraordinary discoveries of the precious metal have lately been made, which continue to amaze and enrich the seekers, and which are doubtless destined to work a mighty revolution in the commerce, if not in the entire destiny of the world.

Much of the interior of this vast insular continent remains unexplored to this day. It lies between the parallels of $10^{\circ} 45'$ and $38^{\circ} 45'$ S., and the meridians of $112^{\circ} 20'$ and $153^{\circ} 30'$ E. of Greenwich. It is separated on the north from the islands of New Guinea and the Moluccas by Torres Strait, and from Timor and other islands in the Eastern Archi-

pelago, by the Arafura sea; on the south, from Van Diemen's Island, or Tasmania, by Bass's Straits: its eastern and southern shores are washed by the Pacific, its western and north-western by the Indian Ocean. The latitudinal difference between Cape York and Wilson's Promontory, the northern and southern extremities, is twenty-eight degrees, equal to 1,680 geographical miles; the greatest distance from east to west is 2,227 geographical miles. The area is estimated at 2,690,810 square miles, and the coast line at nearly 8,000 nautical miles, making the extent of *Australia or New Holland, upwards of three-fourths of that of the whole of Europe.*

TOPOGRAPHICAL DESCRIPTION.

The coast line is marked by deep gulfs, fine bays, and capacious havens. On the *North* is the large Gulf of Carpentaria, with York harbor, or Endeavour strait, on the north-east limit, and Melville Bay at north-west entrance. Van Diemen's Gulf, Cambridge Gulf, Admiralty Gulf, Brunswick Bay, Queen Charlotte Channel, Melville Island, Raffles Bay, and Port Essington, afford secure ports on the north, and north-west shores. On the *West* there are Prince Regent's Inlet, Doubtful Bay, King's Sound, Buccaneers' and Dampiers' Archipelago. Exmouth's Gulf, Sharks Bay, Freycinets harbor, and Swan River. Port George the Fourth, Hanover Bay, and Camden Sound close together, are very fine havens.

On the *South* lie King George's Sound, Fowler's Bay, Spencer's (900 miles deep) and St. Vincent's Gulfs, Encounter Bay, Portland Bay, Port Philip and Western Port.

On the *East* are Jervis Bay, Botany Bay, Port Jackson, or Sydney, Newcastle, Port Stephens, Port Macquarie, Moreton Bay, Hervey Bay, Port Curtis, Keppel Bay, Port Bowen, Princess Charlotte Bay, and numerous secure roadsteads, situated on the north-east, between the Barrier Reefs and the coast.

Australia, like the other continents, has an Island of considerable magnitude attached to it, namely, that of Van Diemen, or Tasmania, lying at the southern extremity. The other principal Islands are Melville and Bathurst on the north, Kangaroo, near St. Vincent's Gulf, and Groote in the Gulf of Carpentaria, Great Sandy Island on the east; and exactly opposite on the west, Dirk Hartog's Island. There are several smaller islets and groups.

Howes' and Balls' Pyramid Islands, east of Port Macquarie, are 400 miles from the shore, and do not partake of the features of Australia. They are very remarkable, and rise in basaltic columns from the sea.

RIVERS.

The navigable Rivers to the Coast are few for the extent of the line. The *Murray*, in South Australia; the *Hunter* and *Brisbane*, in New South Wales; the *Albert*, running into Carpentaria Gulf; the *Adelaide*, into Van Diemen's Gulf; the *Victoria*, into Cambridge Gulf; the *Prince Regent*, *Fitzroy*, and *Glenelg*, on the north-west coast; and the *Swan*, in Western Australia, are the only streams navigable for ships for even a few miles from the ocean, where their entrances are barred.

MOUNTAINS AND HEADLANDS.

So far as the country is known, one mountain range bounds the coast from Bass's Straits to York Peninsula, and is continued in what Leichardt calls a "collar" round the Gulf of Carpentaria; on the western shore ranges run parallel with the coast, and slope off towards the east and north. Probably the highest mountains will be found at the Australian Alps, in the south-east; and at Arnham and Tasman land in the north-west. The dip of the high land on the east coast appears to be from south to north, viz., from Mount Kosciusko, 6,500 feet high in the Australian Alps, in $36^{\circ} 20'$ S., to Mount Hinchinbrook, 3,500 feet, in $18^{\circ} 22'$ S.; Cape Direction, 1,250 feet, in 13° S.; and Pudding-Pan Hill, only 384 feet, in $11^{\circ} 19'$ S. From Fowler Bay, in the Australian Bight, westward to King George's Sound, there are low cliffs of a calcareous marine formation, or sandy dunes, with occasional points of granite; the general elevation being from 300 to 500 feet, without a single watercourse for 800 miles; and according to an intelligent writer in the *Sidney Herald*, the north-west coast between the parallels of 16° and 21° is composed of low sandy beaches, with no appearance of high land behind them. With these two exceptions the whole of Australia is surrounded by a mountain belt, from 2,000 to 6,000 feet in height, at a distance of 50 to 100 miles from the coast, with collateral spurs or buttresses. From the outer and most precipitous side of this girdle short rivers flow to the sea coast; from the inner and less precipitous

face, which in several places declines in successive terraces, different rivers flow, it is supposed, towards some great central basin, or are swallowed up in the burning sands, or evaporated by the intense heat of a tropical atmosphere, increased by the distance of the central parts of Australia from the sea, or possibly these inland streams may be absorbed by immense marshes. But all these suppositions would seem to indicate that this vast island is of recent date compared with other portions of our globe, and that the interior is still little better than a slightly elevated ocean bed, with a mountain crust around it.

The information obtainable of the coast line is imperfect, but the following is a connected view, so far as is known, commencing at Cape Capricorn on the east coast, in $23^{\circ} 30' 30''$ S. lat.

The most remarkable features on the adjacent shore are—Round Hill, 2,000 feet; Mount Larcom, 1,800 feet ; and Peaked Hill ; which stand out in bold relief against the pure blue of an Australian sky ; they are fronted with groups of coral islets connected with the Great Barrier Reef.* Cape Capricorn itself has a hump resembling a haystack.

Southward of Port Bowen there are two peaks with an elevation of about 2,000 feet, which form the northern end of a high rocky range. The country surrounding Port Bowen is picturesque ; many ranges of hills, both peaked and round-backed, rise near the coast, and have an elevation in the interior of 2,000 to 3,000 feet.

In consequence of shoal bars there is not an easy entrance for large vessels much further than *Entrance Island*.

About *West Hill* and *Broad Sound* the coast of the main land is formed of a low sandy shore, with a flat country of five or six miles wide, backed by a bold range of lofty flat-topped hills, with here and there a conical peak. West Hill rises directly from the sea to the height of a thousand feet.

The *Northumberland Islands* have an elevation from 200 to 400 feet, in one instance of 720 feet. The crests of the western isles are covered with pine trees. The *Percy Islands* are also elevated, wooded, and composed of a trap-like compound with an aspect of serpentine.

At *Cape Palmerston* there is a small headland of red quartzose rock, and adjacent there is a cove five or six miles deep by three wide. Near to the harbor are grassy slopes, open woodland, and hills with jungle and lofty trees.

* Stoke's Discoveries in H. M. S. *Beagle*, 1837—43. Juke's Voyage of H. M. S. *Fly*, 1842—46.

A solid range of uniform hills, at a distance of five to ten miles from the coast, between Broad Sound, in $22^{\circ} 15'$ S. lat., and Whitsunday Passage, in $20^{\circ} 20'$ S. lat., bounds a fine undulating tract of country, well watered, covered with abundant close grass, timber of large size and various descriptions, and many small bays and inlets.

Cape Hillsborough is a bold headland, 900 feet high, and very steep all round.

Cumberland Island is a singular mass of rocks, and appears as if made up of angular fragments of compact feldspar cemented together.

At *Port Molle*, at the north-west end of Whitsunday Passage, the shores rise in a steep slope, and in some of the places adjacent to the strait, have an elevation of several hundred feet, covered by magnificent forests, the greater part of which are of the pine species. This timber tree, which resembles the Norfolk Island pine, is found along the east coast from Port Bowen to Cape Melville, but Whitsunday Passage seems to be the favorite locality.

Mount Dryander, on the promontory which terminates Cape Gloucester, is more than 4,500 feet high. There are hills around to the height of 700 to 1,000 feet.

Cape Upstart, so called by Captain Cook, consists of a huge mass of granite, about 2,000 feet high, rising abruptly from the water on all sides, and connected with the mainland by a mangrove swamp. It has a singularly rugged and barren aspect, and appears like a vast mass of ruins,— its crests are covered by huge boulders, or blocks of loose rock, with patches of scrubby vegetation. The cape is insulated by a small creek, winding round the southern foot of the high land, and connecting the bays on the east and west sides of Cape Upstart. Immense beds of mangrove stretch round the head of Upstart Bay, and a wide flat runs for some miles beyond them into the country, over which are seen some bold hills, in separate groups, rising like islands out of the level land.

Captain Blackwood, R. N., crossed a very pleasant grassy country, towards the hills in the north-west.

Mount Elliott, lying about forty-five miles west and by north from Cape Upstart, is a long level hill, peaked at its northern extremity.

Wickham River, north of Cape Upstart, is approached through heavy breakers, and the opening seen by H. M. S. *Fly*, in 1844, was about three miles wide, and had a depth of three and a half fathoms, about 200 yards from the north shore, where the land was an open forest country, with green grass and scattered trees. The south shore

seemed a great mangrove swamp, with a spit of sand running out to sea among the breakers. At a distance of seven miles from the inside of the breakers, the reach of the river curved to the west, became shallower, leaving the steep cliff and forest land of the north or left bank, passing over flats of sand and pebbles ; beyond this the boat could not proceed. From the top of the river cliffs, forest land was seen stretching into the interior, the trees close together, and the underwood thick.

The land round *Cape Bowling Green* is scarcely above the level of the sea, and is probably the delta of a large river. Palm islands are lofty, wooded, and have a picturesque appearance, especially *Magnetic Island*, so named by Cook. The mountain range seen from Cape Bowling Green is at least thirty miles in the rear.

Cape Cleveland is, like Cape Upstart, abrupt and broken, but more woody, having fine pines in many of its gullies. At this point the cordillera of Eastern Australia tower to a considerable elevation close to the coast. From Cape Grafton to Cape Tribulation precipitous hills, bordered by low land, form the coast line ; the latter-named cape consists of a lofty group with several peaks, the highest of which, in the shape of a finger, is visible from the sea at a distance of twenty leagues.

Gould Island Peak, in Rockingham Bay, is nearly 1,400 feet above the sea ; about five miles to the south-west of it is *Mount Hinchinbrook*, 2,500 feet high. It is a broken mass of hills, covered with ragged knolls, and sharp inaccessible pinnacles, furrowed by deep and precipitous ravines. On the mainland is an unbroken range of high land, none of less than 2,000 feet elevation, stretching along the shore to the southward, and after sweeping round Rockingham Bay it rises and spreads to the northward into still loftier and more broken mountainous elevations. The summit of this range, near Rockingham Bay, is very level, but there are many projecting buttresses and ridges on its seaward slope, which is everywhere very steep, and apparently furrowed by many gullies and water-courses.

Endeavour River, where Captain Cook careened in 1770, after grinding the bottom of H. M. S. *Resolution* for twenty-three hours on Endeavour Reef, has for its external aspect bare and rocky hills of moderate height, with their seaward slopes almost destitute of vegetation. On the north shore is a line of sand dunes beneath the higher hills ; on the south shore is a hill of moderate elevation, tolerably clothed with small eucalypti, and sloping down to a grassy flat, fronted by a line of mangroves. Beyond these the land is low for some miles, and then backed by tabular flat-topped hills a few hundred feet high, and of a different aspect to those usually seen on the coast.

Cape Bedford is one of the most remarkable features on this coast, being a bluff detached piece of table land, surmounted by a singular low line of cliffs, which forcibly reminded Captain Stocks of the lava-capped hills on the river Santa Cruz, in East Patagonia.

Cape Flattery is a conspicuous headland, consisting of two peaks, with a slope between them.

Lizard Island, in $14^{\circ} 40'$ S. lat., has a bold aspect of nearly 1,200 feet elevation, composed entirely of granite, and nearly destitute of wood; on the westward is a grassy well-watered plain, with some smaller ridges. The appearance of the coast now changes from moderately high conical-shaped hills to table-land ranges of 500 to 600 feet, trending about south-west and by west.

Cape Melville, which stands out like a shoulder for more than forty miles beyond the coast line, is composed of piles of reddish-colored stones, scattered about in the utmost confusion, and in every possible direction, over a high ridge. There are several dangerous islands and rocks off this headland.

Princess Charlotte Bay is large and free from shoals; at the head of the bay is a remarkable level-topped hill, conspicuous from the low nature of the surrounding country.

Claremont Islands are a low rocky group, surrounded by coral reefs.

Cape Direction has a moderately increasing height, compared with the coast immediately to the southward. A round hill, in 13° S., has an altitude of 1,250 feet.

Restoration Island [visited by Captain Bligh in the *Bounty* launch, in 1789], in $12^{\circ} 37'$ S., is a rocky lump, terminating in a granitic peak 360 feet high. It was so named by Bligh, from his having seen it upon the anniversary of the recall of Charles II. to the throne of England.

Fair Cape, and thence to the northward, presents a series of undulating hills from 500 to 700 feet in length. The monotonous aspect is broken by *Pudding-Pan Hill*, so named by Bligh from its resemblance to a sailor's pudding-pan. It has a height of 354 feet.

Cape York, the most northern point of Australia, has a small rocky island not quite 300 feet high, steep, and nearly conical, separated from the main land by a narrow boat passage. Immediately south of Cape York Island the land rises into a somewhat sharply-peaked hill, with an elevation of 420 feet. It is called Bremer Peak. To the eastward is a shallow bay, with a flat sandy beach, backed by a belt of jungle, then a small woodland, and behind rocky hills 300 feet in height, one ridge of which comes down to the beach. Excellent fresh water is

everywhere procurable by digging, and this position seems well adapted for a British settlement, as it would, in fact, form a "corner shop" for all vessels passing to the eastward.

Endeavour Strait, between Cape York and Cook's islet, is a safe harbor for shipping, except in one or two places near the shore. The west entrance is encumbered by large sand banks, through which, however, there is a safe passage, with never less than four fathoms water. The islands which stretch to the northward from Cape York, across Torres Straits to New Guinea, are all rocky, steep, many 500 feet high, and composed, like the rocks of the adjacent main land, of porphyry, sienite, and siliceous schist. Mr. Jukes considers them merely the submarine prolongation of the great mountain chain of the east coast of Australia, and which passes from New South Wales to the southward, through Bass's Straits to Van Diemen's Land. The loftiest and most massive portion is between Cape Upstart and Cape Melville, whence it gradually decreases to Cape York, where the hills are 500 to 600 feet high.

Possession Islands in the mouth of Endeavour Strait, and the larger islands to the northward, are all rocky and barren, with here and there small fertile and cultivable spots, and by no means deficient in beauty, being of varied and undulating surface, with lofty peaks and ridges, and sheltered valleys, but they seem to be mostly destitute of water, except in the rainy season ; their inhabitants are few and scattered, and appear to be peaceable and well-disposed.

Booby Island, much frequented by boobies, pigeons, and quails, called also the "Post Office," forms the western limit of all the dangerous part of Torres Straits in the ordinary track of vessels, and for half the year it is a constant place of resort for vessels proceeding to India and China from Australia. It is a mere rock, about fifty feet high, and a quarter of a mile in diameter, the summit consisting of bare porphyry.

A shed has been erected, beneath which is a large chest containing a blank book with pens and ink, a bag of beef and some biscuit for any boat's crew escaping from a wreck. Letters are left here by ships, and notices are entered in the book announcing their safe arrival. (A similar practice prevails at the Galipago Islands in the Pacific among the whalers.) All the ships which have recorded their passage at the "Post Office" appear to have entered the Barrier Reef between the parallels of $11^{\circ} 30'$ and $12^{\circ} 10'$, generally about $11^{\circ} 50'$, reaching Sir Charles Hardy's Island the same day. They all note a strong northerly current outside the reef, in some instances of nearly three miles an hour. The

time occupied in making the passage from Sydney by the outer route was from fourteen to twenty days, which was shorter than the route between the reefs and the main land, though attended with much greater risks. In traversing the "inner route," vessels are obliged to anchor every night, which is a severe labor for the small crew of a merchant ship.

The *Barrier Reefs* are a peculiar and important feature in the N. and N. E. coast of Australia; the great coral reefs form a vast submarine buttress which skirt the shore, and in the instance of the "*Great Barrier Reef*" extend from Breaksea Spit in $24^{\circ} 30'$ S. lat., and $153^{\circ} 20'$ E. long., to Bristow Island on the coast of New Guinea, in $9^{\circ} 15'$ S. lat. and $143^{\circ} 20'$ E. long., a distance in a straight line of about 1100 geographical, or 1260 statute miles — the longest known coral reef in the world. This reef stretches along the Australian coast at a mean distance of thirty miles from the land; the outer edge being in some places not more than ten or fifteen, in others 100 miles distant. Outside the barrier there are numerous detached reefs, of greater or less magnitude, extending from Torres Straits to New Caledonia; but the distance of these isolated reefs from the Great Barrier, is from sixty to one hundred miles. There are therefore two passages for vessels sailing from Sydney by the N. E. route to Singapore, China or India, *via* Torres Straits — *first*, the INNER passage, about thirty miles wide, between the main land and the Great Barrier; and *second*, the OUTER, sixty to one hundred miles wide, between the Great Barrier and the detached reefs and coral islets, which are so numerous that Flinders gave to Torres Straits the appellation of the coral sea. Mr. Jukes, the naturalist, on board H. M. S. *Fly*, Captain Blackwood, recently engaged in laying down beacons, by which vessels proceeding to the eastward through Torres Straits might be enabled safely to enter the principal openings in the Great Barrier in order to pass between Australia and New Guinea, has given in an interesting "Narrative of the surveying voyage of H. M. S. *Fly*," useful details respecting these reefs, on the authority of Mr. Evans, master of H. M. S. *Fly*. It appears that the Great Barrier reef is composed of different formations of coral, viz.: — the (1) linear, (2) detached, circular or oval groups. The linear rise from great depths, have a breadth varying from a quarter of a mile to a mile; are in length from three to fifteen miles; have on the outer side an unfathomed depth, and on the inner, soundings of from ten to twenty fathoms. The detached reefs are generally circular or oval, flat at the surface or near the level of low water, the edge gradually rounded off,

sloping down into deep water, sometimes to 200 fathoms, and at Wreck Bay to 285 fathoms without soundings. The centre consists generally of dead coral branches, among dazzling white sand ; the living corals are more to the edge of the reef. The line of reefs runs N. and N. by E., whilst the Australian coast trends to N. N. W. ; the distance from the land is gradually increased, and at Cape York in $11^{\circ} 40'$ S. lat. the passage is eighty to ninety miles wide ; it is, however, supposed there are several inner reefs, and as the coral polypi are continually sending up new banks, this passage, even with its smooth water, must always be hazardous. On the authority of Captain Flinders, it is stated that the Great Barrier Reef towards the south, is ninety to one hundred miles from the shore, with which it has no cross communication. The breadth of the reef towards the south is forty or fifty miles ; it becomes narrower towards the north. At Cape Tribulation, in about 16° S. lat., the Barrier Reef closes in with the shore. For about 350 miles from the southern opening off Breaksea Spit, there is no navigable passage through the barrier that can be safely trusted ; there are some crooked intricate openings. The interior passage between the reef and the land is remarkably clear from dangers, except in the vicinity of the numerous little islands with which it is dotted ; the depth of water at a distance from these islands is very uniform. When the wind is from the east, the sea breaks upon the outer margin of the reef with terrific violence, but the inner waters are perfectly tranquil.

Wreck Reef is 300 miles to the north-west of Breaksea Spit, and was in 1803 an incipient island, in length 150 fathoms, by fifty in breadth, with a general elevation of three or four feet above ordinary high water. A few diminutive salt-water plants resisted the saline spray ; the eggs of sea-fowl were observed ; and probably now there are cocoanut or other trees, whose nuts or roots have been drifted there by the ocean.

On a reef may be seen coral growing beneath the surface of the clear water, in the shape of wheat sheaves, mushrooms, stags' horns, cabbages, and a variety of other forms, with vivid tints of every shade betwixt green, purple, brown, and white ; equalling in beauty, and excelling in grandeur, the most favorite parterre of the curious florist.

The beacon erected by Captain Blackwood, of H. M. S. *Fly*, on Raines islet, as a mark for the best passage through the outer line of reefs, is a circular stone tower, forty feet high, and thirty feet in diameter at the base, where the walls are five feet thick. Internally it is divided into three stories, accessible by ladders. The roof is a dome-shaped frame of wood, covered by painted canvas. The summit is

raised seventy feet above low-water mark. There is a large tank adjacent ; and a garden has been planted with cocoanuts, maize, pumpkins, &c.

Torres Straits on the north, before mentioned, is one mass of islands, reefs, and shoals, with six to twelve fathoms water at the narrowest part, and nowhere deep water, so that with clear weather, and the sun vertical or in the rear, a vessel may be safely navigated. The beautiful light of the tropics is increased by the reflection of the nearly colorless bottom, covered with various molluscae, some perfectly transparent, others of various hues. Fish of all sizes, shapes, and colors are seen ; the voracious shark eagerly pursuing his prey, the turtle rolling along in his unwieldy shell, and sea-snakes of large dimensions and of glowing lustre may be traced in their rapid gliding movements as clearly as if they were flying in the air.

The Gulf of Carpentaria extends inland about 600 miles ; its breadth being about 400, and coast line, including bays and inlets, 900 miles.

Bountiful Islands form the eastern part of the Wellesley group on the south-west coast of the Carpentaria Gulf. They were so named by Flinders on account of the plentiful supply of turtle found there. He mentions having obtained from one turtle 1,940 eggs. Near the islands was noticed, by Stokes, a "shrubby, thick, compact sort of sea-weed," also seen on the parts of the north-west coast frequented by the turtle, and which is probably their food. The islands are one mile and a half from each other ; the larger and more northerly is two miles and a half long by three-quarters wide, with cliffs on the south-east side of sand and ironstone formation, the latter predominating.

Sweers Island, south of the Bountiful Islands, bounded by low dark cliffs on the north-east, is very woody, and was found to be literally covered with locusts.

Bentinck Island has an extent of ten miles either way, is slightly elevated, thickly wooded, and abounds in several sorts of winged game.

Point Inscription (so called from a tree being found by Stokes, with a notice of Flinders' visit in the *Investigator* forty years previous cut thereon) is in $17^{\circ} 6' 50''$, and $7^{\circ} 28' 30''$ E. of Port Essington.

The west shore of the Gulf of Carpentaria is somewhat higher than the east shore, and from Limmen's Bight to the latitude of Groote Eyland, is lined by a range of low hills. Proceeding to the northward the coast becomes irregular and broken, consisting chiefly of primitive rocks, the upper part of the hills being composed of a reddish sandstone. The

general range of the coast, from Limmen's Bight to Cape Arnhem, is from south-west to north-east; and three conspicuous islands at the north-west entrance of the Gulf of Carpentaria have the same general direction. Low land extends westward to *Castlereagh Bay* and *Goulburn's Island*. The *Liverpool River*, on this part of the coast, is four miles wide at its mouth, with a tortuous and rather shallow stream, which has been traced inland to about forty miles from the coast, through a country whose general elevation does not exceed more than three feet above high-water mark; the banks low, muddy, and thickly wooded. West of Goulburn's Island the coast is more broken and irregular, but the elevation is inconsiderable, *Coburg Peninsula* not being more than 150 feet above the sea, and the hills about 300 to 400 feet in the background between the Liverpool and Alligator rivers. Some of them are remarkable for their linear and nearly horizontal outline, the tops resembling that of a roof or a haycock, the transverse section being angular, and the horizontal top an edge. The Coburg Peninsula projects N. N. W. from the main land of Australia for a distance of fifty miles, the greatest breadth being fifteen miles, and the narrowest, five miles.

Port Essington, in $11^{\circ} 6'$ S. lat., and $132^{\circ} 12'$ E. long., is seven miles wide between Point Smith on the east side, and Vashon head on the west. The port extends about eighteen miles in a S. S. E. $\frac{1}{2}$ E. direction, with a depth of twelve to five fathoms. At the southern end it forms three spacious and secure harbors, each of them extending inwards three miles, with a depth of two and five fathom soundings; mud and sand. The shores of Port Essington consist of little bays and sandy beaches, alternating with bold cliffs and steep clay-banks; inland, a continuous forest of trees, occasionally relieved by undulating or round hills, with an elevation of 100 to 200 feet above the sea. At Port Essington, the sides of the harbor are formed by several low rocky headlands, and cliffs of red or white sandstone and ironstone, twenty to thirty feet high; between the cliffs are shallow coves, backed by mangrove swamps, and behind a low country, with a sombre wood of low eucalyptic trees. *Victoria* (a recently formed British station) consists of a few wooden houses, on a flat piece of land forty or fifty feet above the level of the sea, on the west side of the harbor.

Raffles Bay, in $11^{\circ} 12'$ S. lat., $132^{\circ} 26'$ E. long., thirteen miles east of Port Essington, is of a circular form, with a diameter of three miles, and shallow depth, varying from three to four fathoms.

Melville Island, separated from the north coast of Australia by

Clarence Strait, which is about fifteen miles wide, lies between the parallels of $11^{\circ} 8'$ and $11^{\circ} 56'$ S. lat., and the meridians of $130^{\circ} 30'$ and $131^{\circ} 34'$ E. long., five degrees west of the Gulf of Carpentaria, and distant 330 miles from the island of Timor in the Eastern Archipelago. The extreme length from *Cape Van Diemen* to *Cape Keith* is seventy-five miles; the extreme breadth from *Cape Radford* on the north to *Cape Gambier* on the south, is thirty-seven miles. The surface of the island is low and gently undulating, averaging from twenty to seventy feet above the sea, except on the south coast, where some peaks have an altitude of 250 feet. The north line of coast is low, and lined with mangroves; the east, west, and south sides more elevated, sometimes forming abrupt cliffs or clay banks.

Bathurst Island, separated from Melville Island by Apsley Strait, is of a triangular shape, each side measuring about forty miles. It is similar in appearance and production to its neighboring island. The approach to Apsley Strait is intricate, beset with shoals, and notwithstanding an excellent survey made by Major Campbell, formerly commandant of Melville Island, too dangerous for general navigation. Apsley Strait, and the creeks and rivers on the north coast of Australia, abound with alligators of fourteen to twenty feet in length, and sea and land snakes two to twelve feet long.

Port Darwin, in $12^{\circ} 27' 45''$ S. lat., $1^{\circ} 19' 40''$ E. of Port Essington, has an entrance between white cliffy projections, three miles distant from each other; although of considerable size it has much shoal water, especially on the west side. The shore is low and sandy, sprinkled with brushwood, and has singular detached peaks in the back.

Point Peirce, Treachery Bay, where Captain Stokes was speared and nearly killed by the natives, is in $14^{\circ} 25' 50''$ N. lat., $2^{\circ} 49'$ W. of Port Essington. It has wooded cliffs of a reddish hue, from the quantity of iron in the rocks.

CHAPTER II.

CLIMATE.—GEOLOGY.—MINERALOGY.

CLIMATE.

EXCEPTING on the marshy shores of the north-west coasts of Australia, the climate of the whole territory is remarkably salubrious; this is proved by the good health of the Europeans engaged in the exploring expeditions even within the tropics, where they have been most laboriously employed for months, exposed to a burning sun by day, without any shelter by night but that of a tree or ledge of rock, and with very imperfect and scanty nutriment. Yet among many hundreds thus occupied, there is in the long list of sufferings from various causes no record of any one dying from fever or other palludial influences. When Dr. Leichardt proceeded on his perilous journey to the north-west, he found the land become more elevated and the climate cooler. He remarks, "The bracing nature of the south breeze at night had a very beneficial influence on our constitutions, and the regular interchange of land and sea breeze contributes everywhere to render a climate healthy." Captains Grey and Lushington on the north-west coast, after twelve weeks' toilsome exploration, did not suffer from climate disease. Neither did Captain Stokes and his gallant companions experience illness during their surveys of the Victoria, Albert, Adelaide, and other rivers in tropical Australia, although absent for weeks among mangrove shores.

The sandstone strata which constitutes such a large portion of northern and north-western Australia, must have considerable influence in giving the peculiar dryness perceptible in Australia, where, as has been truly observed, every thing absorbs heat freely, and radiates it into the surrounding atmosphere; the sea air, instead of being cooled and precipitated in refreshing moisture, has its temperature raised, and becomes an absorbent of any moisture on the surface, for the open and scattered woodlands, with their small, thinly disseminated leaves, instead of protecting the soil from the parching effects of a vertical sun, become con-

ductors of heat, and are ever ready to catch fire from the slightest spark.

The south wind is always cold, and invariably indicated by a rise of the barometer, which does not ascend above 30.260 or fall below 29.540: rain usually commenced in the north-east quarter, and gradually went round to the north-west. The sky, generally speaking, is without a speck, and the dazzling brightness of the moon is most distressing; it is impossible to shut out its light; and its irritating effects are very remarkable. In Central Australia the fleece of the sheep taken by the explorers into the interior ceased to grow, as did also the hair and nails of Captain Sturt and his party. These facts and the scanty vegetation, indicate the excessive dryness of this portion of the country, arising not only from the solar rays, but also by the terrestrial emission of heat from approximate volcanic fires. It is probable, also, that very little rain reaches the centre of Australia; on the north coast the rainy monsoons are greatly mitigated by the mountainous islands of the Eastern archipelago; on the north-east coast, the lofty coast ridge of four to five thousand feet elevation intercepts the showers from the Southern Ocean; the Australian Alps, in the south-east, are the means of diffusing a large quantity of moisture over the adjacent region, but the comparatively lower elevation of the coast range of Western Australia permits a greater diffusion of rain and dew towards the interior. The presumed absence of any large mountains in the centre of Australia, the great distance of that centre from the ocean, the sandy formation of the country, and the saline qualities of the soil, all contribute to the belief that the interior of this insulated continent will not eventually be found available for the support of civilized man. But making large allowances for the barren central region, and for the sandstone wastes in other places, there probably is not less than two million square miles capable of yielding in abundance the productions of the temperate and of the torrid zones, and where horned cattle and sheep may be multiplied to an extent that would furnish all the inhabitants of Europe with animal food.

The average production of wheat in Australia, on good soils, is from twenty to thirty bushels per acre, weighing from sixty to sixty-five pounds the bushel; in some districts forty, and even fifty bushels have been obtained from an acre of land. Maize yields forty to seventy bushels net, according to the quality of the soil, and the carefulness of the culture. The potato gives two crops in the year, and green peas are gathered in winter as well as in summer.

In New South Wales, January is the middle of summer, and July

of winter. The summer extends from 1st November to 1st March. Spring and fall are brief, but well defined; the winter is of a bracing coolness, with occasional frosts at Sydney, and snow in the interior.

The Spring months are September, October and November: Summer, December, January and February: Autumn, March, April and May: Winter, June, July and August.

March, April and August are generally considered the rainy months.

The average temperature of Spring is $65^{\circ} 5'$, of Summer 72° , Autumn 66° , and Winter 55° .

The Barometrical pressure is about 29.94319 inches, and the average of the Thermometer 64° Fahrenheit.

There is every variety of climate; by proceeding to the Blue Mountains a cold winter may be enjoyed, or at Moreton Bay a warm one. Of course as the land rises above the level of the ocean, a difference of temperature is felt; the winter at Bathurst, where the luxury of snow is in its season enjoyed, being much colder than on the sea shore.

The air is remarkably elastic; old persons arriving in the Australian Colonies from Europe, find much of the hilarity of youth restored to them. Not more than five or six sick persons will be found in a community of twelve or fifteen hundred. At some of the military stations, seven years have elapsed without the loss of a man; several colonists are stated to be upwards of one hundred years old. Mr. Martin saw a woman said to be one hundred and twenty-five years of age, about her daily work, at a roadside inn. Persons frequently sleep in the open air in summer time; and several explorers have for months had no other canopy but an Australian sky. It is said to be owing to the fineness of the climate that dogs do not go mad in Australia, that horses are seldom or never known to kick, that herds of wild cattle have a degree of tame ness unknown on the Pampas of South America, and that the descendants of Europeans are remarkable for their equanimity of temper, which is probably partly attributable to the salubrity of the climate.

According to a meteorological register kept for five years, at the south head of Port Jackson, a naked sandstone cliff, exposed to high calorific effects from solar radiation, the *extreme* range of the barometer was 1.140 inch, and its *mean* range 1.0594 inch, or, in round numbers, about one inch to one-sixteenth. The same general law which influences the barometer in Europe, operates in Australia; the mercury rises with the polar and falls with the equatorial wind; *i. e.*, in Europe a northerly wind would cause an elevation of the barometer; in Australia a south-

erly wind produces the same effect; in both hemispheres an equatorial wind would cause a fall.

The following table exhibits the range of the barometer and thermometer for each month in the year, the state of the hygrometer, and the prevailing winds and weather, at Sydney:—

Months	Barometer, 62 feet above the sea.		Hygrometer.		Radiator.		Thermometer.			Winds.	Weather.				
	Maximum	Minimum.	Max.	Min.	Max.	Min.	Max.	Med.	Min.		Days Fine.	Days Rain.	Stormy.	Cloudy.	Stormy and Cloudy.
Jan....	30.300	29.430	68	9	101	63	91	75 $\frac{1}{2}$	60	S.S.E.	15	4	12	—	—
Feb....	30.300	29.680	75	35	94	48	90	74	58	E.S.E.	20	4	5	—	—
March	30.490	29.580	74	10	83	42	83	71 $\frac{1}{2}$	60	E.	19	10	2	—	—
April.	30.458	27.772	78	40	87	53	83	70	57	W.	21	6	—	3	—
May...	30.442	29.602	79	26	66	35	73	61 $\frac{1}{2}$	50	W.	23	3	—	5	—
June ..	30.350	29.290	78	25	67	32	62	52	42	S.W.	20	1	—	9	—
July...	30.315	29.810	76	27	59	26	60	54	48	S.W.	17	8	5	—	1
Aug...	30.248	29.488	78	29	67	31	66	55	44	S.W.	14	9	7	—	1
Sept..	30.380	29.520	79	18	83	34	67	49 $\frac{1}{2}$	42	N.E.	20	—	8	—	2
Oct...	30.200	29.300	80	20	86	42	82	69 $\frac{1}{2}$	57	N.E.	21	3	5	—	2
Nov...	30.220	29.860	76	10	84	51	91	74	57	E. & W.	31	—	—	—	—
Dec...	30.110	29.530	72	30	96	59	87	75	63	N.E.	20	—	10	—	1
Year..	30.490	29.290	80	9	101	26	91	—	28	—	241	48	54	17	7

The annual mean of the external shade of the barometer at Port Jackson, was—

	1340.	1841.	1842.	1843.	1844.
For the Year -	-	63.186	64.656	62.72	62.73
April -	-	67.23	67.66	61.46	63.62
October -	-	68.16	62.76	63.47	61.07
Summer -	-	—	—	63.390	67.987
Winter -	-	—	—	57.055	57.473
Difference -	-	—	—	11.335	10.514
					10.486

Note.—April corresponds to mid-autumn in England, October to mid-spring.

Annual Mean Temperature at Port Jackson.

Years.	Summer.	Winter.	Difference.
1842	68.390	57.055	11.355
1843	67.987	57.473	10.514
1844	66.731	56.245	10.486

Sydney (Port Jackson) may be compared with a port to the northward and another to the southward, thus—

Thermometrical Range.	Port Macquarie, Lat. 31° 25'.	Port Jackson, Lat. 33° 51'.	Port Phillip, Lat. 38° 18'.
Summer :—			
Maximum -	88.3	81.9	90.6
Minimum -	61.8	59.0	48.8
Fluctuation -	26.5	29.9	41.8
Mean -	75.0	73.9	69.4
Winter :—			
Maximum -	75.3	73.3	69.8
Minimum -	46.8	45.3	36.9
Fluctuation -	28.5	28.0	32.9
Mean -	61.0	59.3	53.3
Annual Mean -	68.0	66.6	61.3
Annual Fluctuation	27.5	28.2	37.3
Warmest month -	Nov.	Nov.	Nov.
Coldest month -	August	July	July

The registers from which the above are taken were kept for the three years ending with 1842. It will be observed that the highest annual fluctuation of the three stations is at Port Phillip, viz., 37.3; but at Quebec it is 59; at St. Petersburgh, 57; at New-York, 55; Buda, 44; at Warsaw, 43.2; at Philadelphia, 43.3; at Vienna, 43; Copenhagen and Zurich, 38.9; Milan, 38.4.

In the southern hemisphere snow is perpetual at 6,000 feet above the sea, in Europe at 10,000 feet. This may be partly attributed to the great extent of ocean in the south, and the absence of any intervening land between the south pole and Australia, whereby there is at least a difference of five degrees of latitude in regard to temperature.

Considerable allowance must also be made for the direction, intensity, and thermometrical condition of different currents of air.

The quantity of rain which falls in Australia is considerable. The following table shows the quantity registered as fallen, with the respective number of days, at South Head, Port Jackson, 240 feet above the mean tide level, out of, and comprehending a period of four years and nine months, equal to 1736 days :—

Year.	No. of Inches.	No. of Days.
1840 (9 months)	49.65	108
1841	76.31	142
1842	48.32	137
1843	62.78	168
1844	70.67	157
Total	307.73	712

Strzelecki gives the annexed returns for New South Wales and Van Diemen's Island, which includes 8730 days' observation brought to the term of averages for every season at each station:—

Station.	Summer.	Winter.	Annual Quantity.	Average No. of Inches.
New South Wales.				
Port Macquarie, - - - -	37.58	25.10	62.68	
Port Jackson, - - - -	24.42	28.00	52.42	{ 48.60
Port Phillip, - - - -	13.25	17.47	30.72	
Van Diemen's Island.				
Woolnorth, - - - -	19.68	29.07	43.75	
Circular Head, - - - -	11.31	24.11	35.42	{ 41.28
Port Arthur, - - - -	16.94	17.75	44.69	

Rain sometimes falls in continuous torrents in Australia. One fall during twenty-four hours in Port Jackson amounted to twenty-five inches; and ten to fifteen feet above the ordinary level of a river is not an unusual height during a season of rain. This statement will dissipate an idea prevailing that little moisture exists in Australia; it must, however, be admitted that, with a comparatively high temperature and thirsty soil, Australia requires a far larger amount of moisture than England; and that the effect is much more beneficial with a smaller quantity in the latter-named country, than that derived from a larger quantity in the former region. At Port Macquarie, where the heat of summer is intense, more rain falls during that season (thirty-seven inches), than in the whole year at Port Phillip (thirty inches), where the

climate is less torrid, and the land less exposed to the effects of the hot winds.

The summer represents that of western Europe, between 41° and 55° N. lat.; the winter, that part of the Mediterranean between the coasts of Spain, Italy, France, and Algiers, extending to Tunis and Cairo. It is probable that the extension of cultivation, the pernicious custom adopted by Europeans, of burning the surface of the land, to obtain a new crop of grass, and the extensive forest conflagrations caused by the carelessness of the aborigines in scattering fire, or by the friction of dry trees, have contributed to increase the mean annual temperature of Australia since its colonization.

Rapid growth, and early development of the intellectual as well as physical structure, characterize human life in New South Wales, especially among females. At fifteen, a girl possesses all the charms, and many of the graces, of womanhood; but it must be admitted, that at the age of thirty, her bloom has passed away, although the vigor of existence is unimpaired. The springs of life seem to attain a rejuvenescence in those arriving from Europe. Numerous instances (as has before been stated) occur of persons arriving in the colony at sixty, and upwards, who acquired new vigor, and attained a hundred years of age.

GEOLOGY, MINERALOGY, ETC.

This immense island appears of *diluvian* rather than volcanic origin; but different causes may have operated conjointly in its formation; after having been left partially dry by the receding of the mighty deep from the north to the south pole, some powerful submarine action (as in the case of Chili, and other parts of America,) may have raised the crust of our globe, in this spot, above the ocean level, either at one shock, or by a series of successive shocks. But one comparatively recent active volcano is known, viz., Mount Wingen, in New South Wales; but vast quantities of marine shells have been found, at various degrees of elevation above the sea, in some places imbedded in sandstone. On the east coast of Australia, sandstone strata lie there in beds, one on the top of another, in the most regular manner, their original relative situation evidently having never undergone any change. Some of these beds, though perfectly horizontal, and of regular thickness, consist of thin laminæ, which incline at a considerable angle to the north-east. This sandstone is principally silicious; sometimes it is argillaceous, and in

this state it is generally found over coal, in which situation it is soft and very decomposable. Among the coal measures, thin beds of what may be called calcareous sandstone are occasionally met with. In fact, according to Mr. Berry, who devoted considerable attention to the subject, the mountain ranges on the east coast of Australia, from Bass' Straits to 19° S. lat., consist, with few exceptions, of vast conglomerations of sandstone.

Mr. Jukes says, that the mountain chain on the east coast has an axis of granite, with occasional large masses of greenstone, basalt, and other igneous rocks. It is flanked on both sides by thick beds of palæozoic formations, chiefly sandstone, but also containing limestone and coal.

At the 19th parallel, a chain of lofty granitic or primitive mountains appears, of various elevation, forming the barrier towards the ocean for about 300 geographical miles, *i. e.*, to the parallel of 14° S. lat. Here the sandstone again predominates, the land gradually dipping till it loses itself in the sea to the north, whence coral reefs extend as far as the eye can reach.

Not the least remarkable circumstance connected with Australia is the contrast its geological features present, when compared with the apparently volcanic islands in the adjacent Coral and Arafura seas. The line of islands between Cape York and Mount Cornwallis are all granite, or old metamorphic rocks, and those lying between that line and the volcanic islands of Erroob and Murray group, are all flat coral islands.

On the north-west coast of Australia the predominant geological feature is red sandstone, while at the island of Timor the little rocky headlands on the coast expose beds of coral and limestone, full of corals and shells apparently of recent formation. This limestone appears to constitute the whole surface of the island, spreading over all the adjacent high lands, at an elevation of 2,000 feet, giving them rather a smooth and level outline.

The rocky islands in the central north and south bend of Torres Strait are, in some instances, inhabited, but only those within thirty or more miles from the coast have cocoa-nut trees on them.

The Coal Formation, as yet discovered, applicable for domestic or steam purposes, is confined chiefly to the east coast of Australia.

Diversity of surface and aspect produces, in Australia, diversity in appearance. Forest timber, brushwood, and grasses are not divided into zones, as in other countries, according to their elevation ; the nature of

the soil and the proximity of water seems to determine the class of productions, irrespective of latitude or altitude. In many places, the whole face of the country has the appearance of a landscape garden—a grove here, a lawn there—beyond a shrubbery, or clump of trees, and frequently a natural wall of light-colored stone, scarcely to be detected from good masonry, and appearing through the foliage like the enclosure of a parterre. The interior explorers found these apparent “pleasure grounds” of various sizes, suited to the humble cottage or the princely mansion. “Even in my own limited experience of these strange regions,” says Mr. M. Martin, “I have felt it difficult to realize the fact, that so far from having been adorned by the hand of civilized man, they were untrodden, save by the foot of the wandering savage.”

The idea that gold was to be found in Australia is by no means a new one. The same gentleman, in writing of that portion of the island called New South Wales, says of St. Vincent County, which is the general coast line of the colony: “The greater, and especially the northern portion of this country, is very wild and mountainous; and will probably afford a rich field for geological and mineralogical research.” And adds in a note, that, in his opinion, gold would be eventually found there; an opinion the correctness of which has been recently so abundantly manifested.

Sir Thomas Mitchell discovered the gold region in New South Wales, while exploring the interior, but he was unwilling to notify the region lest the colonists should leave their flocks and herds to go in search of the precious metal.

Many years since, too, that distinguished geologist, Sir Roderick Murchison, predicted that gold would be extensively found in Australia by reason of its geological formation, with a latitudinal, rather than a meridional direction, to which it may be added, that the perturbing subterranean forces of the earth, as manifested in the Rocky Mountains, the Andes, the Hymalaya, or from Kamtschatka to Borneo have a general axis from north to south.

It would be unreasonable to expect connected details concerning the geological formation of a country so newly discovered, and still so imperfectly known; but the valuable labors of Count Strzelecki, Sir Thomas Mitchell, Messrs. Berry, Jukes, and others, have however furnished much interesting data. The line of coast throughout the territory of New South Wales, presents in general an aspect of bold perpendicular cliffs of sandstone, lying in horizontal strata. These cliffs are occasionally interrupted by sandy beaches, behind which the

country is low, or undulating, the high land retiring to a considerable distance. These spaces are supposed by Mr. Berry to have formed, at no very remote period, the entrances of bays and arms of the sea; indeed in many parts they are still occupied by sandy beaches, extensive salt water lagoons, being separated from the ocean only by a bank of sand, through which the impetuous waves even now occasionally force a passage; as at Reid's Mistake, at Lake Macquarie, near Newcastle, and at Lake Alexandrina, at Encounter Bay. As a general remark, the country east of the Blue Mountains, may be said to be of a sandstone formation, and that on the west granitic.

Australia, particularly Port Phillip and New South Wales, abounds in mineralogical treasures: gold, copper, and steel have been found, but the most useful discovery yet made is coal, which exists in several districts, but especially in the country south of Hunter's river, New South Wales, which is an extensive coal-field, and where the sea cliffs present a most interesting section of this stratum. The seams of coal are distinctly visible on the abrupt face of the cliffs, forming the south headland of the harbor of Newcastle, and may be traced for nine miles, when they abruptly terminate, suddenly bending downwards, and sinking below the level of the sea. From this place a long sandy beach and low land extend to the entrance of Lake Macquarie, the south head of which rises into high cliffs, in which the coal strata again present themselves. Between the coal beds are strata of sandstone, and beds of clay slate, with vegetable impressions—sometimes, but more rarely, indurated claystone. Embedded in these strata, there is abundance of argillaceous iron ore; this is occasionally cellular and in layers, but for the most part it appears in the form of petrifications of trees and branches, irregularly dispersed. The coal is decidedly of vegetable origin, the fibre of the wood being often quite distinct, while the vegetable impressions in the clay slate, under and over the coal, are singularly beautiful; some of these subterraneous plants appear to have been in full flower, so that a skilful botanist might ascertain even their species; and Mr. Berry thought he could distinctly ascertain the leaf of the *lamia spiralis*.

About three miles along the south coast of Newcastle, in an upright position at high-water mark, under the cliff and beneath a bed of coal, there was recently found the butt of a petrified tree, which, on being broken, presented a deep black appearance, as if passing into jet; and on the top of the cliff at Newcastle, embedded at about a foot beneath the surface, lying in a horizontal position, and nearly at right angles to

the strata of the cliff, the trunk of another tree was found, finely grained, both specimens being traversed by thin veins of chalcedony. In the alternating strata of the coal, which runs generally in three parallel horizontal beds, are found nodules of clay, ironstone, and trunks and stems of arundinaceous plants in ironstone; in one place a narrow bed of ironstone, bearing impressions of leaves, is remarkable; while thin laminæ of the same mineral, the surface of which is traversed by square and variously shaped sections of the same, are seen on several parts of the shore, both in the face of the cliff parallel with the beds of coal, and extending into the sea, forming the strand at low water.

Nor are these indications confined to the district of the sea-shore at Newcastle; thin beds of coal and iron may be seen along the banks of the Paramatta river, and in other places. Coal abounds in the vicinity of the burning Mount Wingen, and near the Kingdon chain of ponds; also at Moreton Bay.

The Newcastle (New South Wales) coal, analyzed by Count Strzelecki, gave—(one description)—charcoal, 62.8; bitumen, 25.2; earthy matter, 25.2. One pound of coal yielded one foot 1.806 cubic inches of illuminating unpurified gas. The gaseous mixture contained in 100 volumes, was—sulphuretted hydrogen, 10; carbonic acid, 10; olefiant gas, 17; carburetted hydrogen, 11; other inflammable gas, 52. Every 100 parts in weight, yielded—coke, 71.2; coal tar and ammoniacal liquor, 15.6; ultimate elements, deducting the earthy matter, carbon, 70.5; hydrogen, 20.4; nitrogen, 9.1. This coal burns easily, with a reddish flame, swells and agglutinates. It is of a black color, even fracture, foliated structure, soft and brittle, specific gravity, 1.31. The quality of this coal is about equal to the English Newcastle coal; it is now being extensively raised by the Australian Agricultural Company, who have a lease of the mines. A seam has been recently found ten feet thick; and there are, probably, other large outcrops of coal in the adjacent districts.

Copper ore of very rich quality, is found in great abundance; in the districts of Wellington the beds of ore are supposed to extend for miles in every direction, and according to the *Hawkesbury Courier*, “a high hill in the neighborhood presents indications of being a solid mass of metal.” The *Molong Mining Company* are raising large quantities of ore for shipment to England; and there is a rich vein of copper near Bathurst.

Iron abounds in various parts of the colony; and most of the smaller streams are impregnated with it. A few miles north by west

of Mount Wingen, are stumps of trees standing upright in the ground apparently petrified, and strongly impregnated with iron.

According to Mr. Pattison, in the neighborhood of Camden a mine has been opened where *steel* "is dug from the earth with little boring, and of endless extent."

The volcanic character of the country in the Port Phillip or Adelaide district, has long indicated the presence of rich minerals. Copper and lead ore have been found on the banks of the Barwon river, in the Geelong district. The specific gravity of the lead ore is 6.4 per cent. Copper ore, lead, platina, and manganese, have been discovered along the coast from Point Urquhart to Moonlight Head, at Cape Otway. The ore runs in horizontal veins of four miles in breadth, varying from east-northeast to west-southwest. The specimens of copper ore collected in this district yielded, on an average, forty-five per cent. of copper.

The rivulets Merri and Darebin, in Melbourne district, are strongly impregnated with aluminous matter. *Ironstone* abounds in several districts, usually in the shape of pebbles strewed over a plain. Surveyor Hoddle, in his survey of the country near Melbourne, found that seventy-five per cent. of this stone consisted of iron ore; and so powerful was its effect upon the instruments of the surveyors, as to render it necessary to sell the sections of land at a certain number of acres, more or less, it being found impossible, in some situations, to obtain correct measurements. The sides of Mounts Elephant and Nanime, particularly those of the latter, are covered with a quantity of scoriae somewhat resembling the refuse of smelted iron. These mounts bear every appearance of having had a volcanic origin; their form is that of a horse-shoe, open to the westward; the interior sides slope down almost to a level with the exterior bases.

Gold is plentiful in the Pyreneo mountains, distant about 100 miles from Melbourne. It is said to have been discovered by a shepherd lad, who, after selling his gold at the city, returned to seek for more; he was followed by some persons, and not having since been heard of, is supposed to have been murdered. Dr. Clutterbuck saw, in 1849, at the shop of Mr. Brentani, a watchmaker and jeweller at Melbourne, several pieces of native gold; one lump, of great purity, weighing twenty-two ounces, exhibited minute portions of quartz, was soft in texture, easily cut with a knife, of uneven surface, somewhat oblong, and more than an inch in thickness, as if taken from a perpendicular fissure in the rock. Mr. Brentani is said to have a lump weighing seventy-two ounces. The commander of the ship *Berkshire*, which left Port Phillip for London,

25th February, 1849, purchased fourteen ounces of the native gold from Mr. Brentani at eighty shillings per ounce. Gold-dust has been found in the river *Plenty*, in the bed of the stream, which consists chiefly of mica. Quartz sent to England for analyzation, yielded twenty-eight ounces of gold for each ton of ore.

The following abstract of the report of Mr. Cameron, who was deputed by the local authorities at Melbourne to examine the coal region at Western Port, dated November, 1840, will indicate the nature of the mineral found at Port Phillip or in the Victoria district.

"Upon my arrival at Western Port, I commenced to examine minutely the several seams of coal which presented themselves superficially, lying to the eastward of the bay, which I found situated at such an angle of depression as to be wholly unworkable.

"There were four veins of coal, which were more or less associated with a soapy clay, sandstone, and greystone, and which varied in thickness from one inch to nearly three feet. Upon combustion, these coals emitted a very strong and fierce heat, depositing heavy bases, bearing a yellowish tinge or cast. From the tossed and shattered appearance of those several veins, an indication is manifested of the close affinity of some extensive dyke-fault or trouble, as dislocations in the coal strata are technically denominated.

"Having traced the coal measures throughout the direction of Cape Patterson, about twelve miles to the eastward of the port, I discovered various straggling open seams (termed the crops) of coal, varying in quality and thickness from two inches to four feet, and lying at such an angle as to be rendered available for mining. Here, as in Western Port, the coal is associated with greystone, sandstone, &c. In some, however, of the veins, the coal is of excellent quality, possessing a considerable proportion of bitumen, which would render it especially desirable for the purposes of gas, for exportation to Sydney, or for consumption at the towns of this province hereafter, when the public convenience of gas shall be introduced.

"The lofty and precipitous character of the rocks upon the coast exposed to view a section of strata which induced me to advance some miles farther than the strict line of my instructions directed. On approaching towards that part of the coast which inclines towards Cape Liptrap, I found the coal strata increased in thickness and regularity; but, from an accident which occurred to me at this period, whilst prosecuting my researches, I was precluded from following up my observations with a close examination. These were, nevertheless, sufficiently

justificatory of my suggestion, that, in any future search for coals, this portion of the district should be minutely examined. The increased thickness and regularity of the measures strongly indicate, though not positively, the association of more extensive beds or seams of coal."

Mr. Surveyor Smythe, who explored the south-east coast from Point Urquhart to within about fifteen miles of Cape Otway, says that extensive veins or seams of coal commence at a point thirty miles from the Port Phillip heads, and dip in every direction, the general bearing being north-northwest and south-southeast. The mineral seems to abound over a considerable extent of country. It is described as "in large seams of four feet in thickness, extending from 400 to 600 feet in length; as burning well, with little or no smoke, and leaving a fine white ash, resembling the purest description of cannel coal."

CHAPTER III.

AGRICULTURE.—STAPLE PRODUCTS.—LIVE STOCK.—WOOL.—TALLOW.—COMMERCE.—IMPORTS.—EXPORTS.—SHIPPING, ETC.

AGRICULTURE.

At the period of the formation of New South Wales, or during its early struggles, when the colonists were again and again on the eve of perishing for want, how strangely the prophecy would have sounded in men's ears, could it have been foretold, that in little more than half a century, the colony would not only produce a sufficient quantity of animal and vegetable food for the support of a quarter of a million Englishmen and their descendants, but that Australia should have, in that short time, become the greatest wool-exporting country in the world ; her salubrious climate, and the pasturage of her virgin soil, rendering the increase of sheep and cattle so rapid, as to induce their owners to slaughter them in great numbers, merely for the sake of the tallow thus obtained.

There are no consecutive details concerning the grant, sale, and cultivation of land in the colony ; some idea of the progress may be conveyed by the following general statement :

Year.	Granted.	Cultivated.	
		Cleared or Pastured.	Acreage.
1810	95,637	81,937	13,700
1820	381,466	349,195	32,271
1825	673,699	127,878	45,514
1828	2,906,346	231,578	71,523
1833	4,014,117	—	—
1848	5,500,000	—	163,669

The Quantity of Land in Cultivation, showing Crops and Produce (exclusive of Gardens and Orchards), in New South Wales, including the District of Port Philip, from the Year 1837 to 1848 inclusive.

Year.	CROPS.									Total Number of Acres in Crop.
	Wheat.	Maize.	Barley.	Oats.	Rye.	Millet.	Potatoes.	Tobacco.	Sown Grasses, Oats, and Barley for Hay.	
1837	Acres. 59,975	Acres. 18,381	Acres. 2,551	Acres. 3,893	Acres. 493	Acres. 80	Acres. 1,165	Acres. 533	Acres. 5,054	92,125
1838	48,060	25,043	2,922	3,767	429	39	1,788	925	9,939	92,912
1839	48,401	22,026	3,490	6,793	483	46	1,115	424	12,534	95,312
1840	74,123	24,966	5,144	5,453	609	115	2,594	381	12,721	126,116
1841	58,605	25,004	5,423	5,892	495	47	4,027	380	15,257	115,130
1842	65,188	27,324	5,320	4,467	486	99	5,174	224	18,592	126,874
1843	78,083	29,061	5,727	4,537	514	42	5,872	655	21,162	145,653
1844	81,903	20,798	7,236	4,336	259	43	6,783	871	21,766	144,095
1845	87,894	25,372	10,455	6,109	330	36	5,101	483	27,551	163,331
1846	88,910	31,773	9,215	9,390	177	82	5,537	228	37,221	162,533
1847	81,044	27,240	7,178	10,201	310	82	5,550	67	33,111	164,784
1848	87,219	20,375	8,789	13,572	167	14	5,774	201	27,558	163,669

Year.	PRODUCE.									Hay.
	Wheat.	Maize.	Barley.	Oats.	Rye.	Millet.	Potatoes.	Tobacco.		
1837	Bushels. 692,620	Bushels. 632,155	Bushels. 51,447	Bushels. 17,119	Bushels. 6,753	Bushels. 695	Tons. 2,102	Cwts. 2,034	Tons. 5,627	
1838	469,140	556,268	32,103	13,416	4,878	353	3,496	4,952	6,960	
1839	805,140	525,507	66,033	27,788	7,008	283	2,601	2,509	25,923	
1840	1,116,814	777,947	105,389	66,020	8,563	3,338	11,050	4,300	21,329	
1841	832,776	503,803	90,172	62,704	6,507	1,072	11,141	2,642	17,175	
1842	854,432	590,134	88,767	84,321	4,451	1,201	12,561	2,014	18,622	
1843	1,000,225	719,358	95,658	92,268	5,145	410	16,392	6,098	27,774	
1844	1,312,652	575,913	132,612	70,620	4,475	511	22,748	6,382	31,848	
1845	1,211,099	499,122	175,407	88,193	4,101	775	19,906	3,985	28,614	
1846	1,421,750	870,400	193,835	216,783	2,250	1,929	18,329	2,087	42,754	
1847	1,027,802	725,704	87,636	221,731	1,200	798	14,240	725	33,111	
1848	1,528,874	262,340	145,219	116,643	2,386	158	14,954	3,059	37,795	

Note.—From 1837 to 1841 the Crops and Produce of Land beyond the Boundaries of Location are not included.

"To the question of how far this country is available for colonization, I would reply," says Dr. Leichardt, "the greatest part is fit for pastoral purposes, excepting only the scrubs of the east coast of Australia, the mountain gorges of the Upper Lynd, and the tea-tree scrubs of the west coast of the Gulf of Carpentaria. But even here broad belts of fine country extend along both sides of the larger rivers, and will very probably be found quite as good as the country of the Roper. Horses and cattle will do well over the whole extent, particularly at Expedition Range, along the Isaacks, the Burdekin, the east coast of the gulf, and on the plains at its head. The rapid increase o

the buffaloes on the Coburg peninsula, and the excellent condition of the herd of cattle which they keep at Port Essington, show that the north-west coast of Australia is no less favorable for the development of animal life. The elevation of Peak Range, and of the table land of the Burdekin, leads me to believe that these regions are fit for sheep. I am not sufficiently acquainted with the cultivation of tropical plants to give a decided opinion, but there is such a variety of soil, of aspect, and of elevation, that I feel convinced tropical plants will grow freely where sufficient moisture exists. The cotton, the indigo, the cocoa-nut, the banana, the arrow-root, the sweet potato, the bread-fruit tree, the jack-fruit, the soursop, the pine-apple, the mango, and mangostine grow well in Port Essington; and captain Macarthur assured me that, according to the statement of the Malays, who had examined the swamps west of the settlement, they would do excellently for growing rice. The large plains of the Alligator rivers would suit equally well, and to an almost unlimited extent."

I cannot give a better description of the productions of the several localities than by the following tables; showing the principal productions of each district, and the demand for labor in them. This statement is compiled from returns furnished by the benches of magistrates in the different parts of the colony, for the first quarter of the year 1849; and, although somewhat voluminous, it is too important to intending emigrants, and too illustrative of the condition of the various divisions of the territory, to be omitted, or even curtailed:—

Districts.	Distances from Sydney in English miles.	Principal Agricultural and other Productions of the District.	Demand for Laborers, and description of Laborers required.
Sydney	—	The chief productions are vegetables and fruits.	The supply of mechanics and tradesmen is now kept up by the Colonial youths (sharp intelligent lads), who, after having completed their various periods of apprenticeship, enter the labor market, and are said to be clever and expert workmen. Farm laborers and female domestic servants are in request.
WESTERN. Paramatta	15	Hay, wheat, green barley, and maize, grapes, oranges, lemons, and vegetables.	There is a great demand for all sorts of country labor.
Windsor	34	Wheat, maize, potatoes, and hay.	All descriptions of country labor are in request, and a sufficient supply cannot be obtained.
Penrith	33	Wheat, barley, maize, oats, potatoes, tobacco, hay; grapes for making wine are grown to a considerable extent.	Female domestic servants and general laborers may readily obtain employment, at a fair rate of wages. Since the harvest commenced there has been a great scarcity of labor felt in this district, and farm laborers can readily obtain employment, at good wages, during the present season.

Districts.	Distances from Sydney in English miles.	Principal Agricultural and other Productions of the District.	Demand for Laborers, and description of Laborers required.
Hartley	78	Wheat, potatoes, and oats.	There is no particular scarcity of labor in the district, but shepherds and farm laborers are still in demand.
Bathurst	113	Wheat and barley . . .	There is still the same demand for servants of the following descriptions, viz.:—Shepherds, hutkeepers, farm laborers, cooks, housemaids, and general house servants. Single men and women, or married couples without children, would obtain employment readily.
Carcoar	144	Wheat, barley, oats, potatoes, hay.	Farm laborers, shepherds, hutkeepers, and domestic servants, particularly female servants, are in request. They are not to be hired at any wages.
Frederick's Valley .	{ 152	Wheat, hay, corn, and potatoes. There has been an abundant crop of wheat and hay, but the potato and the corn crops will be a failure, in consequence of the drought.	Shepherds and hutkeepers are in request.
Molong	163	Wheat, corn, hay, wool, meat, and mineral productions.	An additional supply of laborers of the following descriptions is still wanting:—Shepherds, watchmen, stockmen, miners, and house servants, male and female.
Binalong	205	Wheat, oats, barley, hay, maize, potatoes.	Shepherds, watchmen for sheep, agricultural laborers, blacksmiths, and house-servants are in demand.
Wellington	230	Wheat, maize and hay.	Shepherds, hutkeepers, house servants, and general farm servants are in request.
Dubbo	270	There is little or no agriculture.	The demand for laborers of the following descriptions is still urgent:—carpenters, stonemasons, stockmen, hutkeepers, shepherds, sawyers, fencers, and farm laborers.
Mudgee	150	Wheat, maize, &c.	Shepherds, hutkeepers, and house servants are in demand.
SOUTHERN.			
Liverpool	20	Wheat, hay and maize.	Female house servants are in great demand. They are not procurable in the district.
Campbelltown . . .	33	Hay, wheat, corn and butter.	Farm and domestic servants, male and female, are in urgent demand.
Camden	39	Wheat, maize, hay, and dairy produce. The culture of the vine is also considerable, and increasing yearly, A good many horses are bred, and some sheep.	This district is amply supplied with mechanics, but there is a scarcity of the other kinds of labor. Wages are decidedly on the rise. From the abundance of fertile land, and the proximity to the Sydney market, this district affords an opening for the comfortable settlement of a dense population. During the last five years the number of inhabitants has doubled itself. There are also ample means for public worship, religious instruction, and education.
Picton	49	Wheat, maize, rye, oats, barley, hay, butter, &c.	All descriptions of country laborers are in request, chiefly general farm servants, such as ploughmen, laborers, gardeners, milkmen, mowers, and thatchers.
WESTERN.			
Wollongong	64	Wheat, maize, oats, barley, potatoes, hay, and butter.	Steady, sober, and honest agricultural laborers and milkmen are much wanted in this district; also, female servants. Agricultural labor only is in request.
Berrima	81	Wheat, oats, barley, potatoes, hay, and all descriptions of English grain.	Farm laborers and domestic servants are in request.

Districts.	Distances from Sydney in English miles.	Principal Agricultural and other Productions of the District.	Demand for Laborers, and description of Laborers required.
Kiama	88	Wheat, maize, oats, barley, potatoes, cheese, butter, honey, beef, and pork.	Farm and house servants, and milkmen are in request.
Bungonia	117	Wheat, barley, oats, hay, maize, potatoes, cheese, and butter.	Laborers of the following description are in request;—carpenters, wheelwrights, and blacksmiths; shepherds, farm laborers, and house servants, especially females.
Marulan	108	Wheat, barley, oats, hay, maize, potatoes, butter, and cheese.	Carpenters, wheelwrights, stonecutters, watchmen, and cooks, shepherds, laborers, house servants, especially females, are in request.
Goulbourn	125	Wheat, oats, maize, barley, and potatoes.	Shepherds, farm and domestic servants, both male and female, are in request.
Braidwood	164	All kinds of grain.	All kinds of country labor are in request.
Shoalhaven	103	Wheat, maize, potatoes, and dairy produce.	Laborers are very scarce and wages high in consequence. Agricultural laborers and dairymen are most in request.
Broulee	209	Wheat and potatoes, principally with maize, barley, and oats.	Farm laborers and female servants of all work are in request. It is impossible to procure female servants, in particular general house servants. There are no farm laborers to be got. In harvest, or any other hurried time, the small settlers are obliged to assist each other.
Cooma	251	Wheat, barley, potatoes, and oaten hay. There is a good supply of the above this season, with the exception of the potatoes.	Good house servants and shepherds are in demand, and would readily find employment in this district. The labor in request is chiefly that required for pastoral and agricultural purposes.
Eden	253	Wool and tallow; little or no grain of any description; potatoes and hay are the only articles of farm produce raised.	Shepherds, stockmen, and hutkeepers, are in request.
Queanbeyan	182	Wheat, barley, potatoes, maize, and hay.	Domestic servants of all descriptions are much required in this district.
Yass	179	Wheat, maize, oats, barley, potatoes, fruits, vegetables, hay.	Laborers and servants of every description are in great request, and improvements are lying over for want of them.
Tumut	225	Wheat, oats, hay, maize, and potatoes.	The operations of the settlers are completely paralysed for want of labor. Children from eight years of age to sixteen are engaged at wages from £12 to £20 per annum. The laborers wanted are shepherds, hutkeepers, farm and house servants, laundresses, housemaids, and nursemaids.
Gundagai	244	Wheat, maize, potatoes, and hay.	Labor of every description is much wanted. Wages are very little, if any, lower than last quarter. The principal demand is for stockmen, shepherds, hutkeepers, watchmen, agricultural laborers, and domestics. A few mechanics would meet with constant employment.
Wagga Wagga	303	Wheat, oaten hay, maize, in limited quantity; potatoes to a limited extent; wool and tallow. The soil, however, is capable of producing, in luxuriance, every description of crop by the medium of ordinary industry. Fruits of all kinds thrive well; and the vine, which has been latterly introduced, promises to rank amongst our principal products.	The employers of labor in this district are all complaining of the very high rate of wages, and improvements of every kind are neglected in consequence. Were wages low and labor abundant, the settlers here could give employment to at least 500 fresh male laborers every year. There is now a demand in the district for carpenters, smiths, wheelwrights, sawyers, brickmakers, shepherds, agricultural laborers, and domestic servants, male and female.

Districts.	Distances from Sydney in English miles.	Principal Agricultural and other Productions of the District.	Demand for Laborers, and description of Laborers required.
Albury	379	Wheat, maize, oats, barley, grass, and oaten hay, potatoes, &c.	Shepherds, watchmen, agricultural laborers, and female domestic servants, are in request.
Moulamein	400	Sheep, cattle, and wool. No agricultural productions.	There is an ample field for shepherds, hutkeepers, and others who will make themselves useful about sheep-stations. The most helpless will find employment if he has only the use of his limbs and legs. The present demand is for shepherds, hutkeepers, and bush carpenters.
NORTHERN. Brisbane Water . .	30	Maize, potatoes, onions; also, oranges, grapes, and other fruit.	The demand for labor has been gradually increasing since the commencement of 1845, and many people would hire men if they could get them. The sum given to a laboring man does not, by any means, indicate the amount really paid by the employer for efficient service. There is abundant employment in the district for men who work by the job in the bush, chiefly on their own account, as sawyers and splitters, and who either sell their produce on the spot, or send it to Sydney; consequently, some of the best workmen are at work on their own account, and most of those employed on farms are in some way inefficient, which increases their wages virtually from 10 to 20 per cent. or more, by reason of the labor performed by them being below the average quantity or quality. The want of labor and high wages still operate in limiting the cultivation of land. We think that vineyards (for which the soil is, in many places, well adapted) would be extended if labor was not so high.
Macdonald River . .	66 {	Wheat, maize, barley, and potatoes.	There is a great demand for general agricultural laborers in this district.
Wollombi	93 {	Wheat, maize, potatoes, hay, grapes, &c.	Male and female farm and domestic servants are in great demand.
Newcastle	70		Agricultural laborers and female servants are in request.
Raymond Terrace . .	85	Maize, wheat, barley, oat-hay, and lucerne, potatoes, beef, pork, poultry, butter, cheese, salt, cloth, leather, fruit, and wine.	
Port Stephens . . .	91	Wheat, maize, oats, barley, potatoes.	Shepherds, domestic servants, male and female.
Dungog	150	Wheat, maize, potatoes, hay, tobacco, cheese, butter, bacon, hams, hides.	Farm laborers, bullock drivers, stockmen, wheelwrights, splitters, and fencers are in request.
Paterson	131	Wheat, maize, barley, millet, potatoes, tobacco, cheese, hay, fruit, and wine.	Agricultural laborers and house servants are in request.
Maitland	110	Wheat, maize, oats, barley, potatoes, hay, tobacco, fruits of all kinds.	A slight reduction has taken place since the arrival of immigrants, but the demand for useful laborers of the following descriptions is still urgent:—Males—laborers of all sorts, farm laborers, and shepherds. Females—house-servants of all work, cooks and laundresses.
Singleton	124	Wheat, maize, hay, tobacco, and grapes.	Agricultural, pastoral, and domestic servants are in request.
Muswellbrook . . .	156 {	Wheat, maize, and hay. {	Domestic servants are much wanted; shepherds and laborers are also in request.
Merton	170 {		The difficulty in obtaining labor is very great, and the amount demanded, as wages, is ruinous to the proprietors.
Scone	182	It is not, generally speaking, an agricultural district, there are several vineyards.	The immigration of the past year has not at all affected the price of labor in this district. Shepherds and farm servants are most in request.

Districts.	Distance from Sydney in English miles.	Principal Agricultural and other Productions of the District.	Demand for Laborers, and Description of Laborers required.
Murrurundi	200	Wheat, maize, potatoes, and wool.	All kinds of country labor are in request.
Cassilis	335	Wool and hay.	Shepherds and watchmen are principally in request.
Wee Waa	250	Wool and fat stock.	Shepherds, hutkeepers, stockmen, and country mechanics are in request.
Tamworth	264	Wheat and maize.	The demand for labor in the district is on the increase, and likely to continue so. The descriptions required are shepherds, stockmen, hutkeepers, farm laborers, and blacksmiths.
Warialda	280	Wheat and maize, but in quantities so very small as to be of no importance.	The recent immigration has not yet exercised any perceptible influence on the rate of wages in this district; the demand for labor still exceeds the supply to such an extent, as to occasion great loss and inconvenience to employers. Shepherds, bullock-drivers, house servants, and laborers of every description are in request.
Port Macquarie . . .	278	Wheat, hay, maize, and potatoes.	Farm laborers, shepherds, and house servants are in request. Female servants are much wanted.
M'Leay River . . .	250	Maize, wheat, a few potatoes, and a small quantity of tobacco.	There is a demand for labor in the district, to which the supply is not equal, and a number of laborers of the undermentioned descriptions would find immediate employment at remunerating rates—stockmen, farm laborers, and bullock-drivers; and a few single females as general house servants.
NORTHERN.			
Wellingrove	330	Wheat, potatoes, and corn.	Although wages are about £3 to £4 less, it can only be effected by great risk in the increase of numbers of the flocks, occasional employment of blacks, and thus standing out against the exorbitant wages asked, waiting any opportunity to replace those who will not take any reduction. The most urgent demand is for shepherds.
Armidale	334	Wheat, barley, oats, maize, and potatoes.	Shepherds, watchmen, laborers, and mechanics are in request.
Tenterfield	334	Wheat, maize, and potatoes, for local consumption; also, wool and tallow for exportation.	Shepherds are most wanted, but farm laborers and mechanics are also in request.
Tabulam	380	Maize and potatoes . . .	Shepherds, hutkeepers, and stockmen are in request.
Grafton	280	Wool, tallow, maize . . .	Great scarcity of shepherds, stockmen, farm laborers, bullock-drivers, and house servants. Good house servants are not to be obtained.
Canning Downs . .	390	Maize, potatoes, wool, tallow.	Many hundreds would find employment. Shepherds, watchmen, joiners, carpenters, smiths, agricultural laborers, and domestic servants of both sexes.
Warwick	406	Wool and tallow	Shepherds, watchmen, fencers, carpenters, blacksmiths, wheelwrights, agricultural laborers, and domestic servants, of both sexes, are in request. Many hundreds would find employment.
Drayton	409	Maize	The demand for laborers, shepherds, and domestic servants is great, and large numbers would find immediate employment.
Brisbane	450	The vegetable productions are chiefly maize, potatoes, and garden stuff, a very little oats for hay.	Stockmen and shepherds are in request.
Ipswich	470	Wool and tallow	Stockmen, shepherds, bullock-drivers, and hutkeepers are the descriptions of laborers in request.

VICTORIA, OR PORT PHILLIP.

Districts.	Principal Agricultural and other Productions of the District.	Demand for Laborers, and description of Laborers required.
Melbourne	Wheat, oats, potatoes, barley, vegetables of all sorts in abundance.	Most parts of the district are still requiring laborers; the city and vicinity a little better supplied than heretofore, in consequence of late arrivals of immigrants. All kinds of labor required.
Western Port . . .	Wheat, oats, potatoes, and maize.	There is still ample room for any number of immigrants likely to arrive; but single men and young married people without many children are generally preferred in the bush. Shepherds and farm servants are the descriptions of laborers in request. The scarcity of labor was never more severely felt.
Portland	Wheat, oats, hay, vegetable, wool, hides, tallow, black oil, black cattle, and sheep.	
Geelong	Wheat, barley, oats, potatoes, and all kinds of vegetables.	The families of mechanics exceeding three, without adults, may probably meet with difficulties on their arrival. Domestic servants, farm servants, and shepherds, are in request.
Murray	All kinds of grain . .	Agricultural and pastoral laborers are in request.
Gipps Land : : :	Grain, wool, and fat stock for exportation.	Shepherds, stockmen, and farm laborers are in request.

Of the productiveness of the Australian soils, there cannot be a doubt. Many farms have been annually cropped for twenty years without manuring; the eucalypti trees, by shedding their bark, annually furnish an ample supply of alkalies to the soil, which has a degree of softness, coherence, and porosity, common to all virgin soils; a low specific gravity, and a proportion of organic to inorganic matter, amounting to a third, and in some instances to a half of the whole quantity. The numerous places where carbonic acid gas escapes through the fissures of the earth in New South Wales, cause many of the rivers, particularly near their source, to be impregnated with this acid, and they are also charged with mineral salts. In frequent instances the waters of the colony pass through calcareous rocks, and carry with them dissolved lime; they are therefore very valuable for irrigation, which may be most extensively and usefully practised in Australia. Any one who has visited Malta, and seen the rich crops produced on an apparent barren sandstone formation, by irrigation, will recognize the great benefits which New South Wales would derive from pursuing the same course.

Mr. J. Pattison, a resident of twelve years' experience in New South Wales, and the author of a recent brochure on its resources and capabilities, says the country is capable of sustaining many millions of people by its agricultural products; for "there is abundance of land of the richest description." Speaking of the qualities of the soil, he says:—"The produce, under a good system of husbandry, is enormous, and

would stagger the credibility of those who have not been eye-witnesses. The late Dr. Wilson, R.N., obtained, at his estate in the county of Murray, *eighty-five bushels of wheat per acre*; and at Narren Gallen, near Yass, on the estate of Cavan, I have seen 700 bushels reaped from a field of fourteen acres, or equal to *fifty bushels per acre*.”*

WINE AND BRANDY.

The number of acres planted with the vine, and the produce thereof, on the 31st of March, 1849, was as follows:—

Counties.	Acres.	Wine.	Brandy.
		Gallons.	Gallons.
SYDNEY DISTRICT:—			
Argyle	7	50	—
Bathurst	4	450	—
Bligh	3½	74	—
Brisbane	79	4,467	4
Camden	60	21,350	260
Cock	24	330	—
Cumberland	259	17,413	352
Durham	162	29,808	75
Georgiana	—	—	—
Gloucester	82	4,045	72
Hunter	19½	957	—
King	6	25	25
Macquarie	22	4,300	280
Murray	6½	30	—
Northumberland	112	11,001	95
Phillip	1½	180	—
Roxburgh	25	2,560	—
St. Vincent	—	—	—
Stanley	2½	—	—
Wellington	—	—	—
Westmoreland	0¾	—	—
Beyond settled District	11	260	—
Total in 1848	887	97,300	1,163
“ in 1844	508	33,915	751
PORt PHILLIP DISTRICT:—			
Bourke	57	—	—
Grant	48	6,000	100
Normanby	3	306	—
Total	108	6,306	100
General Total in 1848	995	103,606	1,263

* New South Wales: its past, present and future condition; with notes upon its Resources and Capabilities. London, published by Johnson & Hunter, 1849—p. 90.

The progressive increase of Live Stock in New South Wales is thus shown :—

Years.	Horses.	Horned Cattle.	Sheep.	Pigs or Swine.
1788	7	7	29	
1810	1,114	11,276	34,550	
1820	4,014	68,149	119,777	No returns.
1825	6,142	134,519	337,622	
1828	12,479	262,868	536,391	
1848	113,895	1,752,852	11,660,819	70,875

Such a rapid augmentation in the number of domesticated animals is unexampled in the history of any country, and would have been yet more remarkable but for the extensive slaughtering of horned cattle and sheep to obtain tallow. Live Stock has become a staple export of Australia. Horses are shipped in large numbers to the East Indies, their southern origin fitting them pre-eminently for that trying climate.

Live Stock Exported from New South Wales and Port Phillip.

Year.	Horses.	Asses and Mules.	Horned Cattle.	Sheep.	Hogs.	Value.
1843	248	2	1,852	77,116	—	£41,915
1844	489	3	3,329	53,318	—	40,394
1845	1,159	—	3,972	33,651	6	53,438
1846	1,021	—	6,052	37,848	4	52,942
1847	466	—	8,034	71,440	—	57,355
1848	1,182	—	16,904	895,211	—	85,184

The extensive herds of cattle will naturally cause a large increase in the hide and leather trade. The colonists have also turned their attention to the curing of animal food, which now forms a valuable item in their staple products.

The following table shows the quantity and value of salt meat exported from, and the value of salt meat imported into, the colony in the under-mentioned years :—

Year.	Beef, Pork, and Mutton.	Mutton and Hams.	Bacon	Tongues.
1843	Quantity. 2,867 casks 856½ tons	—		Quantity. 224 lbs.
1844	4,292 casks 294¾ tons	20,615		110 cwt. 150 in No.
1845	1,142 casks 425½ tons 345 packages 4,400 lbs. preserved meats 721 casks	94 cwt. 11,422 in No.		63 casks 2,450 in No.
1846	1,126 tons 12 packages of preserved meats 4,335 casks 866 tons 224 packages of preserved meats 23,08 casks	39 cwt. 300 in No.		12 casks 300 in No.
1847	615 tons 90 casks of preserved meats	224 cwt.		127
1848		145 cwt.		228

The origin, progress, and the production of wool, deserves especial notice, from the material share it has had in the growing prosperity of Australian commerce, and moreover for its beneficial influence on the manufactures of the mother country. There can scarcely be a doubt, that the extensive growth of wool in Australia, and the reduction of price in German and Spanish wools, have had a most important effect on the woollen manufactures of England, and enabled her to maintain a competition with foreign countries.

In 1829, the quantity of foreign wools imported into England was 21,118,976 lbs.; of which 1,838,642 lbs., or about *one-twelfth* part came from the Australian colonies. The importations for the year 1834 were 45,647,870 lbs. of which the Australian colonies sent 3,558,091 lbs. or less than *one-tenth*. In 1848 the total quantity of wool imported into the United Kingdom was 69,343,477 lbs.; of this Australia furnished 30,034,567 lbs., in the following proportions:—New South Wales and Port Phillip, 22,091,481 lbs.; Van Dieman's Island, 4,955,968; South Australia, 2,762,672; Western Australia, 129,295; and New Zealand, 95,151 lbs. The colonies in the Southern Pacific, therefore, contributed nearly *one-half* of the whole wool imported in the year 1848. The proportions of colonial to foreign wool imported for twenty years, be-

tween 1826 and 1846, at intervals of five years, is thus shown ; the two figures represent so many million lbs. weight ; by colonial wool is understood all wool from possessions of the British crown :—

Annual Averages of Five Years.	Foreign Wool.	Colonial Wool.	Total Importation.
1826—30	25	2	27
1831—35	34	4	38
1836—40	44	10	54
1841—45	36	22	58
1846	34	30	64
1848	40	29	69

The year 1850 would be still better in behalf of Australia ; and let it be remembered that in 1826, the proportion of colonial to foreign wool was only the *two hundred and fiftieth part* of the annual imports into England. In the year 1850, the number of fine-woollen sheep in Australia was 12,000,000, and yielded about 25,000,000 lbs. of wool, and increasing in this ratio, it may fairly be expected that the produce within the next five years, will be at least 50,000,000 lbs. annually.

Tallow promises to form nearly as valuable an article of export as wool.

The extent to which the slaughtering and melting down system has been carried, is shown in the following statement of the quantity of tallow and lard produced in New South Wales in 1848 :—

Number of Boiling-down Establishments, Cattle, Sheep, &c., slaughtered, and Tallow and Lard produced.

Number of	Sydney, within the settled Dis.	Sydney, without the settled Dis.	Port Phillip District.	Total.
Establishments	41	14	7	62
Sheep . . .	141,573	24,128	120,691	286,392
Horned Cattle .	27,682	5,415	5,545	38,642
Tallow, cwts. .	49,311	11,530	27,725	88,567
Hogs. . . .	23	33	2	58
Lard, cwts. . .	875	990	200	2,065

COMMERCE.

The maritime commerce of Australia was for many years in a very unsatisfactory state. The imports were in value about five times that of the exports; and the balance of payments in exchange, was defrayed by bills on the Treasury in London, to meet the convict expenditure in the colony. There were then few exportable articles, and it was feared that no staple products available for transmission to England could be created. By extraordinary energy these difficulties have been surmounted. There is now no convict expenditure from the Home Treasury, and an examination of the annexed complete returns of the value of imports and exports for the last 20 years will show that they are now balanced, the one against the other.

Imports into New South Wales and Port Phillip, 1828 to 1848.

Year.	From Great Britain.	From British Colonies.	From South Sea Islands.	From Fisheries.	From United States.	From other Foreign States.	Total.
1828	£399,892	£125,862	—	£44,246	—	—	£570,000
1829	423,463	135,486	—	42,055	—	—	601,004
1830	263,935	60,356	—	91,189	—	—	420,480
1831	241,989	68,804	—	179,359	—	—	490,152
1832	409,344	47,895	—	147,381	—	—	604,620
1833	431,220	61,662	—	218,090	—	—	713,972
1834	669,663	124,570	—	197,757	—	—	991,990
1835	707,183	144,824	£1,420	177,365	£18,902	£70,161	1,114,805
1836	794,422	220,254	1,972	135,730	22,739	62,289	1,237,406
1837	807,264	300,313	1,764	80,441	9,777	97,932	1,297,491
1838	1,102,127	309,918	5,548	71,506	8,066	82,112	1,579,277
1839	1,251,969	576,537	3,863	186,212	23,093	194,697	2,236,371
1840	2,200,305	431,146	1,318	104,895	24,164	252,231	3,014,189
1841	1,837,369	332,296	24,361	97,809	35,282	200,871	2,527,988
1842	854,774	298,201	10,020	64,999	20,117	206,948	1,485,059
1843	1,034,942	227,029	22,387	42,579	12,041	211,566	1,550,544
1844	643,419	153,923	10,624	32,507	17,187	73,690	931,260
1845	777,112	237,759	40,048	43,503	7,416	128,016	1,233,854
1846	1,119,301	262,943	21,799	56,461	4,459	165,559	1,630,522
1847	1,347,241	383,724	6,919	41,557	1,550	195,032	1,982,023
1848	1,084,054	263,787	2,642	73,715	2,065	130,287	1,556,550
1849							

Exports from New South Wales and Port Phillip, 1828 to 1848.

Year.	To Great Britain.	To British Colonies.	To South Sea Islands.	To Fisheries.	To United States.	To other Foreign States.	Total.
1828	£84,008	£4,845	—	£6,708	—	—	£90,050
1829	146,283	12,692	—	15,821	—	—	161,716
1830	120,559	15,597	—	—	—	—	141,461
1831	211,138	60,354	—	16,949	—	—	324,168
1832	252,106	63,934	—	19,545	—	—	384,344
1833	269,503	67,344	—	—	—	—	394,801
1834	£400,738	128,211	—	28,729	—	—	557,640
1835	496,345	83,108	£2,696	39,882	£18,594	£3,011	682,193
1836	513,976	[1]36,596	9,628	30,180	13,697	2,625	748,624
1837	518,951	157,975	485	54,434	10,617	17,592	760,864
1838	583,154	160,640	7,137	33,988	11,324	6,525	802,768
1839	597,100	289,857	1,347	34,729	18,568	7,175	948,776
1840	792,494	520,210	6,621	27,864	27,885	24,618	1,399,692
1841	706,336	238,918	13,144	18,417	4,837	41,715	1,023,397
1842	685,705	298,023	3,005	22,862	17,101	40,715	1,067,411
1843	825,885	285,756	17,934	18,827	—	23,918	1,172,320
1844	854,903	236,352	14,106	11,623	—	11,131	1,128,115
1845	1,254,881	276,788	17,656	1,593	—	5,068	1,555,986
1846	1,130,179	328,922	13,441	590	—	8,407	1,481,539
1847	1,503,091	335,137	14,231	—	—	17,587	1,870,046
1848	1,483,224	335,887	6,944	—	—	4,313	1,830,368
1849							

The relative proportion of the shipping engaged in the trade of Sydney, New South Wales, and of Melbourne, Port Phillip, is thus shown by the tonnage entering inwards from Great Britain, the British Colonies, and elsewhere, in 1848:—

—	From Great Britain.	From British Colonies.				From South Sea Islands.	From Fisheries.	From United States.	From other Foreign States.	Total.					
		New Zealand.		Elsewhere.											
		No.	Tons.	No.	Tons.										
Sydney	No. 71	Tons. 34,309	No. 106	Tons. 23,877	No. 232	Tons. 45,173	No. 23	Tons. 2,695	No. 63	Tons. 17,473	No. 30	Tons. 7,753			
Port Phillip	No. 48	Tons. 23,295	No. 10	Tons. 956	No. 406	Tons. 42,349	No. —	Tons. —	No. —	Tons. —	No. 5	Tons. 1,018			
Total	119	57,604	116	24,883	639	87,522	23	2,695	63	17,473	1	406			
											35	8,771			
											996	199,300			

SHIPPING.

The increase of the shipping entering the ports of New South Wales has been very great since 1828:

Year.	Number.	Tons.
1828	137	32,559
1829	158	37,342
1830	157	31,225
1831	155	34,900
1832	189	36,020
1833	210	50,144
1834	245	58,532
1835	260	63,019
1836	269	65,415
1837	400	80,114
1838	428	91,777
1839	560	135,474
1840	709	178,958
1841	714	183,778
1842	628	143,921
1843	558	110,864
1844	417	87,539
1845	597	105,352
1846	767	141,467
1847	878	154,904
1848	996	199,304

In twenty years, the number of ships increased seven-fold, and the tonnage six-fold. Since 1848, the shipping and trade of the colony have been very largely augmented.

The number and tonnage of vessels built and registered in the colony have been :

Year.	Vessels Built.		Vessels Registered.	
	Number.	Tons.	Number.	Tons.
1834	9	376	19	1,852
1835	7	303	21	2,267
1836	9	301	39	4,560
1837	17	760	36	3,602
1838	20	808	41	6,329
1839	12	773	79	10,862
1840	18	1,207	98	12,426
1841	35	2,074	110	11,250
1842	26	1,357	89	9,948
1843	47	1,433	92	7,022
1844	18	519	87	8,087
1845	18	1,042	98	9,376
1846	28	1,032	83	4,895
1847	36	2,284	104	9,428
1848	28	1,561	103	7,584

The numbers respectively built and registered during 1848 in the Sydney and Port Phillip districts, were—

District.	Ships Built.		Registered.		
	No.	Tons.	No.	Tons.	Men.
Sydney, - -	26	1,281	87	6,618	336
Port Phillip, -	2	280	16	966	80
Total,	28	1,562	103	7,584	416

The ports of Australia, Van Dieman's Island, and New Zealand, (i. e., Australasia,) are favorably situated for carrying on the whale fishery in the southern hemisphere. Since 1845, whalers have been exempted from port charges in Sydney; and the value of the fisheries in eighteen years is thus shown :

Year.	Sperm Whale.	Black Whale.	Whalebone.		Seal Skins.	Value.
	Tuns.	Tuns.	Tons.	Cwts.	Quantity.	
1828	348	50	—	—	7,647 in number	—
1829	885	—	—	—	12,350 "	£94,101
1830	1,282	518	—	—	5,460 "	115,780
1831	1,914	1,004	—	—	4,972 "	—
1833	3,183	420	—	—	2,465 "	169,278
1836	1,700	1,178	—	—	386 "	126,085
1837	2,559	1,565	77	—	107 "	183,122
1838	1,891	3,055	174	—	3 cases	197,644
1839	1,578	1,229	134	14	7 "	172,315
1840	1,854	4,297	250	—	474 in number	224,144
1841	1,545	1,018	84	13	41 "	127,470
1842	957	1,171	60	5	162 "	77,012
1843	1,115	190	22	8	155 "	72,989
1844	810	526	15	18	3 bales	57,493
1845	1,352	571	21	13	2 casks, 10 Skins	96,804
1846	1,064	344	17	9	—	70,126
1847	1,214	331	8	3 $\frac{3}{4}$	—	80,528
1848	1,186	196	11	2	4 cases	68,969

The number of ships engaged in the whale fishery in 1848, in connection with New South Wales, was 64; viz., 37 foreign; 3 British; 24 colonial; and the produce—sperm oil, 1,274 tuns, value £67,005; black oil, 389 tuns, £9,180; whalebone, 306 tons, £1,472. Total value—£77,652. At Port Phillip there were four boats engaged, which collected 15 $\frac{1}{2}$ tuns of oil, value £235; whalebone, 6 tons 6 cwt.

CHAPTER IV.

STATE OF SOCIETY.—RAPID IMPROVEMENT AMONG THE POPULATION, ETC.

IT has been before stated that the colony of New South Wales, the first settled portion of Australia, was established as a penal colony in 1787, but the progression of society there has been most satisfactory.

The early censuses are said to be incomplete. The increase has been as follows:—

Year.	Population.	Year.	Population.
1788	1,033	1833	60,861
1810	10,452	1836	77,096
1821	29,783	1841	120,856
1828	36,598	1846	154,534

The estimate to 31st December, 1848, is 220,474. The number of inhabitants (including the Port Phillip district), was, independent of the late influx, estimated at a quarter of a million.

The progressive augmentation of the female population will be perceived from the following table; this did not arise solely from female emigration, but from the large proportion of female to male births—a proportion which I, says Mr. Martin, observed in Australia pervaded the whole range of domestic animals. It seems to be a law of population, that where there is room in a new country, and the command to “increase and multiply” is not perverted by polygamy, there is always a larger proportion of *female* than male births; but in an old-established country, fully peopled, a check is put to an injurious increase by a greater proportion of male than female births.

In a return laid before the Legislative Council of New South Wales by the able colonial secretary, Mr. Deas Thompson, on the 12th June, 1849, and by Mr. Mansfield’s analysis of 1841, the increase of the population, male and female, since 1821, is thus shown:—

Years.	Adults.		Children.	Total.
	Males.	Females.		
1821	21,693	8,090		29,783
1828	27,611	8,987		36,598
1833	44,688	16,173	Not separated.	60,861
1836	87,298	43,558		130,856
1839	63,784	21,998		114,386
1840	70,021	25,476		129,463
1841	75,474	33,546		149,669
1842	76,528	35,762		159,889
1843	76,147	35,474		165,541
1844	74,912	36,170		173,377
1845	74,951	36,223		181,556
1846	82,847	42,287		196,704
1847	83,572	41,809		205,009
1848	86,302	44,562		220,474

CENSUS OF MARCH, 1851.

By this census (the latest that has been taken) the population in the different colonies of Australia was thus given:—

New South Wales	-	-	-	-	-	-	200,000
Port Phillip or Victoria	-	-	-	-	-	-	70,000
South Australia or Adelaide	-	-	-	-	-	-	70,000
Swan River or Western Australia	-	-	-	-	-	-	10,000
Aborigines	-	-	-	-	-	-	30,000
 Total	-	-	-	-	-	-	380,000

IN THE CITIES.

Included in the above the following was the population of the cities:

Sydney, New South Wales	-	-	-	-	-	-	60,000
Melbourne, Victoria	-	-	-	-	-	-	25,000
Adelaide, South Australia	-	-	-	-	-	-	14,000

Until another authentic census shall have been taken, it is scarcely possible to form an opinion of the present number of inhabitants, resident and denizen, in the two first mentioned colonies, of which we are more particularly treating, since the influx to the ports of Melbourne, Port Phillip, and Sydney, cannot be accurately estimated. Some idea

may be formed of the immense increase when it is stated that the daily arrivals are estimated in round numbers at a thousand souls.

The progressive improvement in the morals of the population has also been very great, as shown by the most reliable and authentic sources of information. In fact, there are just grounds for stating that New South Wales is more free from crime than could have possibly been expected by the most ardent philanthropist. It may not be irrelevant to quote in this place an unimpeachable testimony in behalf of a large portion of the present population of the colony, which reflects great credit upon them.

Mr. T. H. Braim, formerly of St. John's College, Cambridge, and now head principal of Sydney College, N. S. W., in his interesting *History of New South Wales to 1844*, thus speaks of the Australian youth :—

“ Descended, as many of them have been, from parents whose names were stained by crimes against their country and their God ; brought up under a fearfully imperfect mental training, a neglected moral cultivation, and either an entire omission, or at the best but an imperfect performance of the duties and ordinances of religion, they have yet risen superior to these disadvantages, have earned for themselves a good name, have reared families in honor and respectability, and are now themselves in the enjoyment of general esteem and confidence, and their children, availing themselves of blessings placed within their reach, which their fathers knew not, are bearing upon them the buds of excellence.”

Of the emancipists, he says :—

“ They form no uninteresting part of the population ; feeling that they had a bad character to lose and a good one to gain, they have in many instances set themselves about the work of reformation ; some of them are reckoned among our most honorable tradesmen and merchants, among the most liberal supporters, too, of the various benevolent institutions which adorn our land (Australia). Some of these institutions have been all but entirely founded, and are now mainly supported by their means. In many cases they have, by their industry and perseverance, acquired considerable wealth ; and in most instances the wealth thus obtained has been generously and honorably devoted to the public benefit, the real and substantial advancement of this land of their expatriation. Nor do we know a more pleasing trait in human character than that which is thus displayed ; once degraded, they have paid to a violated law the satisfaction it imperatively demanded ; but when the debt was paid another obligation was felt to remain behind. Society

had lost that beneficial influence which each member is called upon to exercise, and to atone for this was now their honorable desire. In the fair and honest pursuit of commerce, by untiring industry, they acquired those means which enabled them to gratify their wish—a competence—more, a profession—rewarded their patient toil ; and no sooner was this poured into their lap, than they gave it back, spreading it through numerous channels, through each of which, as it flowed, it left blessings that even succeeding ages may enjoy. To say nothing of many public buildings, which are the chief architectural embellishments of our city, and which have been the result of their enterprise and zeal, we turn to some of those institutions of charity and benevolence which own them as their earliest supporters.”—[Vol. ii., pp. 315-16.]

CHAPTER V.

SAILING DIRECTIONS, TIDES, WINDS, ETC.

THE distances and bearings of the several points around the coast are stated to be as follows:—

	Miles.
Wilson's Promontory to Cape Howe, N. E.	250
Cape Howe to Breaksea Spit, N. a little E.	950
Breaksea Spit to Cape York, N. W.	1,150
Cape York to Cape Van Diemen, W.	900
Cape Van Diemen to North-West Cape, S. W.	1,300
North-West Cape to Cape Leeuwin, S.	900
Cape Leeuwin to Great Australian Bight, E. a little N.	1,200
Great Australian Bight to Wilson's Promontory, S. E.	1,100
<hr/>	
Circumference in round numbers	7,750

The voyages and discoveries of those skilful and enterprising seamen, Flinders (1801–2), King (1818–20), Wickham and Stokes (1837–43), Blackwood (1842–46), Stanley, Bremner, Chambers, Heywood, Hobson, and other naval officers, have furnished valuable nautical surveys of the coast line of this vast island.

TIDES.

The tidal wave strikes the whole coast of Australia, from Sydney to Torres Strait, nearly at the same time, viz., at eight o'clock at the full and change of moon. At Cape Palmerston, the rise is from twenty-four to thirty feet, while at Port Bowen to the south, and at Port Molle to the north, the rise is only sixteen feet. At Port Bowen the flood tide comes from the south, while at Broad Sound and to the north, it comes from the north. On the north-west coast of Australia, about Cambridge Gulf and Buccaneer's Archipelago, there is also a limited space where the rise and fall of tide is greater than on the adjacent coasts. At Rockingham Bay, Endeavour River, and about Palm Island, there is no tide at all. At Hanover Bay, on the west coast, the highest tides occur on the fourth day of the full or change of the moon, when they attain a maximum height of twenty-five feet, while during the neaps, the dif-

ference between high and low water does not sometimes exceed twenty-four inches. Captain Stokes says that the tides in the head of the Gulf of Carpentaria appear to be a compound of many others, obliterating the common daily difference, and producing only one tide in twenty-four hours. The direction of the flood stream commences at S. S. E., changing gradually to S. S. W. as it terminates; that of the ebb changes from N. W. to N. N. E. The strength of each is from a quarter to one knot; rise at springs, nine to twelve feet; at neaps, three to eight feet. At the entrance of Van Diemen's Inlet, in the Gulf of Carpentaria, it is high water at the full and change of the moon at a quarter to seven, but in the upper part the tides are three hours and a quarter later. The length of both flood and ebb is twelve hours, and the direction of the flood being from the northward, following the eastern shore of the gulf. There are currents from Breaksea Spit to Torres Straits; from thence it sets to the north-west, but after passing the strait it is affected by the monsoons.

WINDS.

In the tropics the real motion of the earth in an opposite direction to the apparent motion of the vertical sun westward, produces a westerly motion both in the tides of the sea and in the atmosphere; hence the origin of the "trade winds," which extend beyond the tropics into both hemispheres, and shift northerly and southerly with the declination of the sun. These winds tend more to the southward as the latitude increases, and extend farthest into each hemisphere during its summer. A great portion of the southern hemisphere being sea, the extra-tropical wind is much more regular than in the northern, but in both the prevailing wind blows in an opposite direction to the trade; hence on the south and west coasts of New Holland, the south-west wind is the most constant, and it produces an easterly current in the ocean which is felt along the south shore.

The arid and heated surface which appears to form the interior of Australia, attracts the wind from the north coast, and it blows to the south and east in hot and violent gusts, the thermometer reaching frequently 120° Fahr. It has been marked at 110° Fahr. on Christmas eve in New South Wales. In the winter season, when the land begins to cool, west winds prevail on the south coast. There is no periodical recurrence of dry and rainy seasons between Cape Howe and the tropic of Capricorn, where the variations incident to the torrid zone commence. The south-east trade wind is tolerably regular for three-fourths of the year, and the sea and land breezes steady. From Torres Strait to Cape

Van Diemen, the monsoons are felt in the open channel; the south-east wind blows from March or April to November; weather generally fine during the remainder of the year, when the sun is nearly vertical. The north-west monsoon is accompanied by heat, thunder, lightning, and heavy rains. The great size and peculiar configuration of the Gulf of Carpentaria has considerable influence; the south-east monsoon, which is a sea wind, brings the rainy season; the north-west, which is a land wind, brings dry weather.

The north-west coast lying between the tropics and the east trade wind, and trending to the southward, has not so much of a tropical character, and the east monsoon which begins in April, and blows in gusts, seldom lasts longer than the end of June. The monsoon in summer (December and January), blows from the west, varying a point or two to the north or to the south. In February the west wind dies away; the weather becomes variable, with squalls and heavy rain. Currents follow the wind on the west coast; the general winds are from between the north-west and south, but generally toward the west, and near Cape Leewin chiefly from the south-west—in summer, often from the north-west during the night. The ocean current divides into two parts at Cape Leewin; one sets east along the south coast, the other north along the west coast.

On the south coast the wind is from the west during the greater part of the year, and easterly only during the latter end of summer in January, February, and March; it is then felt most at projections of the coast, viz., near Wilson's Promontory and King George's Sound.

The land wind on the north-west coast has the same dry and parching character as in New South Wales; when Captain King rounded the north-west Cape in February, and got under the lee of the land, the air which had previously been of a pleasant temperature, become so hot as to produce a scorching sensation. Towards the middle of the north-west coast, he found the temperature at noon in the shade 120° Fahr., and on land ten degrees higher. The north-west and north coasts partake of the unhealthiness of a tropical region, the atmosphere being infected by vegetable miasma. The intertropical parts of the east coast, possessing high and diversified land, not so subject to be flooded, and with regular monsoons, appears more salubrious. The general direction of the winds on the west and south-west, south and south-east coasts, being from the sea, the temperature in summer is delightful. On the Blue Mountains in New South Wales, and on the Australian Alps in Port Phillip, snow falls in winter, and it freezes there for several months, generally in June, July, and August. Hail falls in large, irregular masses during the summer.

The prevailing directions of the winds at Sydney are thus indicated :—

Wind's Direction.	Morning.	Noon.	Evening.
North	4	7	23
North-northeast	—	11	11
North-east	12	129	109
East-northeast	—	11	5
East	4	3	8
East-southeast	1	2	5
South-east	9	45	70
South-southeast	8	27	13
South by East	1	5	4
South	29	31	15
South by West	3	2	4
South-southwest	8	11	8
South-west	109	35	45
West-southwest	42	5	3
West by South	4	2	1
West	118	10	8
West by North	2	—	—
West-northwest	6	2	3
North-west	4	16	19
North-northwest	1	8	5
North by West	—	—	2

During the summer months a regular sea breeze sets in daily, and refreshes the inhabitants along the coast. The direction, humidity, and siccidity of the winds in Australia, are, doubtless, influenced by the general laws which govern the atmospheric circulation ; but these laws are modified by various local circumstances, such as the extent and form of the island-continent, and the vastness of the surrounding ocean. Winds from the northerly and southerly quarters are the most numerous ; in winter on an average of 100 winds, 60 proceed from the southerly quarter, making the proportion of the polar to the equatorial, as 3 : 1 ; in summer, of 100 winds, 42 are from the northerly quarter—polar to equatorial, 1 : 2. These proportions vary at Port Phillip and other stations, owing, probably, to the position and configuration of the land.

At Port Jackson the winter is marked by the prevalence of the polar winds, and the summer by that of equatorial ; at Port Phillip, the equatorial prevail in winter, and the polar in summer ; and in Van Diemen's Land the equatorial winds prevail during both summer and winter.

The mean direction of this wind in New South Wales is from the north-west, and its velocity sometimes exceeds a regular gale ; occasion-

ally it has a *ricochet* movement, or appears produced by a rotation on a set of horizontal axes.

The land, on approaching Port Jackson from the southward, appears low, compared with the coast of the Illawarra district; the cliffs near Port Jackson are about 200 feet in height; and in general effect and outline, though darker colored, not unlike the Dover cliffs of England.

Suddenly an abrupt breach is seen in the sea-wall, against which the vast volume of water in the Southern Pacific is rolled with incessant swell; but the moment the tempest-tossed mariner has fairly passed through this singular cleft or fissure, the waters are as tranquil as a mill-pond. On the south head of the entrance of Port Jackson, an excellent light-house* was erected by Governor Macquaire, which Captain Stokes says he saw, in her H. M. S. *Beagle*, at a distance of thirty miles, from a height of fifty feet, during the period of a clear atmosphere.

Sydney, the capital of New South Wales, is built partly in a narrow ravine or valley. The formation on which it stands is a freestone rock, which passes inland for about two miles, in undulating and nearly parallel ridges, in a direction almost due south of that portion of Port Jackson generally known as the *Stream* or *Middle Harbor*, which, with Sydney Cove and Darling Harbor, incloses greater part of the city on three sides. The ridges decline as they recede from the Middle Harbor, until they terminate in an almost level plain, bounded on the south by a transverse range of elevated rock, known as the Surry Hills, which comprise the southern suburbs. The boundaries of the town of Sydney, port of Sydney, Sydney Cove, and Darling Harbor, are:—

Town of Sydney.—Bounded on the north by the waters of Port Jackson, from a landmark at the head of Blackwattle Bay to Rushcutter's Bay; on the east by the Stream entering Rushcutter's Bay, to a bridge on the South Head Road at the north-west corner of Sydney Common; and by the western boundary of that common to a road extending west-

* The light-house is in $33^{\circ} 51' 40''$ S. lat., $151^{\circ} 16' 50''$ E. lon.; the tower is admirably built; the height of the light (a revolving one) from the base being 76 feet, and above the sea 277 feet,—total 353. The inner S. head bears from the light-house N. by W. $\frac{3}{4}$ W. distant a mile and a quarter. The outer N. head bears it N. by E. two miles. The inner S. and outer N. heads lie N.E. $\frac{1}{2}$ E. and S.W. $\frac{1}{2}$ of each other, distant a mile and one-tenth. The light can be seen from S. by E. to N. by E., and from a ship's deck, on a clear night, eight to ten leagues, appearing like a luminous star. Bearings magnetic, distances nautical—variations 9 degrees E.

N. B.—The N. end of the “Sow and Pigs” rocks, near which there is a light, bears from the inner S. head S. W. by W. half a mile.

ward to the back of Cleveland House; on the south by that road and its western fence prolonged to a landmark on the road to Cook's River; on the west by the western side of the road to Cook's River, and that line prolonged to a landmark at the head of Blackwattle Bay.

Port of Sydney.—The channel extending westward from the heads of Port Jackson to Long Nose Point, including Sydney Cove, Darling Harbor, and extending one mile up Middle Harbor, and the various other bays or inlets on each shore thereof.

Sydney Cove.—The waters included within a line extending from Dawes' Point to the north-west bastion of Fort Macquaire, and the shores to the southward of this line.

Darling Harbor.—The waters included within a line extending from Dawes' to the south-east point of the shore nearest to and opposite to Goat Island; the shores of this harbor on the side of the town and those opposite to them.

Port Phillip was discovered by Lieutenant Murray, R. N., when commanding the *Lady Nelson*, New South Wales colonial brig, in January, 1802, and was shortly after visited and surveyed by Captain Flinders, in His Majesty's ship *Investigator*. The entrance is scarcely two miles in width, but within, the port expands into a spacious haven. The heads are forty miles from the innermost anchorage, off Melbourne, situated at the north side of the bay, which has a breadth varying from twenty to sixty miles, and includes an area of not less than 875 square miles of water, capable of holding in perfect safety the largest fleet of ships that ever went to sea. The entrance is narrowed by rocks lying off *Point Nepean* (in $38^{\circ} 18'$ S. lat., $144^{\circ} 30' 30''$ E. long.), and by shoals on the opposite headland. It is, however, deep enough to admit vessels of any size at low water, and may be safely entered at flood-tide, which rises six feet. Masters unacquainted with the harbor, should not attempt to enter at night or at ebb tide. There are numerous sand-banks about the middle of the harbor, which break the force of the sea when the wind is from the south, and afford a smooth anchorage near Melbourne; the eastern passage to which, along the bay, is the deepest and safest. On the western side of Port Phillip, a branch or arm extends into the land in a west-southwest direction for about fifteen miles, and has an entrance of about six miles wide; it is called *Geelong Harbor*. A small basin at its upper end communicates with the larger one by a narrow navigable channel. Geelong Harbor runs nearly east and west, and there is secure anchorage at its farthest extremity.

The principal features, on entering the bay of Port Phillip, are *Ar-*

thur's Seat, Station Peak [Youang], and a bluff in the north-east, called Dandonong. Youang is one of a small cluster of lofty peaks, rising abruptly out of a low plain on the west side of the bay. Arthur's Seat forms the north extremity of a towering range, declining gradually, on the east shore, to the coast at Cape Shanck.

The following is an ABSTRACT OF THE DIRECTIONS FOR ENTERING PORT PHILLIP, as laid down by Captain W. Hobson, R. N., of H. M. S. Rattlesnake, who made a running survey of the port.

"In approaching Port Phillip from the westward, the entrance cannot be distinguished until Point Nepean bears N. N. E.; then you open Shortland Bluff, and obtain a view of the Estuary. But the position of the entrance is easily determined by its situation with respect to Mount Flinders to the westward, and Arthur's Seat to the eastward. Mount Flinders is a small flat-topped hill at the extremity of the low land; it makes like an island, and bears W. $\frac{1}{2}$ N. from Point Nepean. Arthur's Seat is the highest land on the coast westward of Western Port; from the southward its north-west extremity appears precipitous; it slopes to the south-east, and its summit bears E. $\frac{1}{2}$ S. from Point Nepean, which is situated on the eastern side of the entrance, at the extremity of a peninsula, which slopes gradually from the base of Arthur's Seat; at one-sixth of a mile N. W. by W. from the Point is a low rocky islet, connected with the shore by a reef, which dries at low water; even in calm weather the sea breaks on it with considerable violence. Point Lonsdale, on the western side, is a low point jutting out from a dark rocky cliff, from which a reef runs two cables' length to the eastward, and forms the southern extremity of a bay that terminates at Shortland Bluff to the northward. To enter Port Phillip a fair wind or a flood tide is indispensable; with a fair wind keep in mid-channel between Point Nepean and Point Lonsdale, and steer in for Shortland Bluff until Point Nepean bears S. E. by S., then shape a course as hereafter directed for the channel through which you mean to pass; with a beating wind do not approach Point Lonsdale nearer than a quarter of a mile, and be careful to avoid a sunken rock which lies N. W. by W., two cables' length from the rocky islet off Point Nepean. The soundings across the entrance are very irregular, varying in one cast from seven to twenty-four fathoms, and again suddenly shoaling to five or six. On the edge of the reef of Point Lonsdale is a depth of five fathoms close to the rocks, and the same depth on the southern edge of the reef that extends from Point Nepean to the rocky islet. The tide in the

entrance runs with considerable force in the height of the springs. From its impetuosity, and the irregularity of the bottom, a rippling is created which in rough weather would render it very unsafe for an undocked vessel to pass through, and presents to a stranger so much the appearance of breakers, that it requires good nerve to venture on. If the wind should be light, care must be taken to get into the fair way before you come too near the reefs, as the flood-tide sets across them towards the entrance of the port, with great strength. As the entrance is only contracted by projecting points, with a favorable tide or a fair wind, you are soon within them, and then if you are desirous to anchor, a good berth may be found anywhere between Observatory Point and Point King, within half a mile of the shore, in seven fathoms, clay bottom.

" When bound through the Western Channel, take care to avoid a little shoal called the Pope's Eye, on which there is only twelve feet. The following marks will place you exactly on it. Swan Point N. 1° E. (mag.) Mount Eliza, summit on with north end of the flat island. If bound through the Western Channel, pass to the westward of Pope's Eye, by keeping Swan Point to the northward of N. $\frac{3}{4}$ E., until Shortland Bluff bears W. $\frac{1}{2}$ S., and steer for the entrance of the channel, which lies between a shoal that commences two cables' length to the northward of Swan Point and the west bank; to clear the bank off Swan Point, keep Point Lonsdale just open with Shortland Bluff, until Swan Point bears N. $\frac{1}{2}$ W., the course then is N. N. E., and mid-channel will be preserved by keeping Point Nepean a finger's breadth open with Swan Point; the soundings are from four fathoms at the centre, to a quarter less three at the sides, from which the banks shoal suddenly to five or six feet, and in some places dry at low water; when Station Peak is seen over the north red cliff, bearing N. 72° W., you are clear to the northward of the banks, and will be in seven fathoms water. In approaching from the northward, bring Point Nepean open with Swan Point before the north red bank bears N. 72° W., and follow the leading marks. This channel has now a buoy marking the entrance on the edge of Pope's Eye, two more on the edge of the shoals on either hand, and a fourth on the Swan Spit. In beating through, you must be guided by the eye on the eastern side when the shoals show themselves very distinctly, and take care not to shut the marks. In standing to the westward, at all times, it is advisable to keep a person aloft, whence the shoals may generally be distinguished. The tide runs from two to three knots per hour, and follows the direction of the channel. To pass

through the south channel when fairly within the port, keep along the south shore, at a mile distance, in nine or ten fathoms water, until abreast of Point King, from which situation an E. by S. course, with very slight deviations, will carry you through. It is impossible to find any leading mark for a channel so long, and in some places so narrow, that is not more liable to perplex a stranger than to guide him. The only certain measures of navigating it, until regularly buoyed, is by the eye from aloft, and when the weather is too hazy to show the banks it is not safe to go through. The soundings in the south channel are very irregular, from sixteen fathoms to five, and close to the edge of the banks, from that to three, two, and one fathom. Although the deepest water is to be found in this channel, it is not to be preferred by vessels drawing less than sixteen feet water; the absence of any leading mark, and its great length, being a great objection. The harbor-master in a late government notice, has declared this passage to be impracticable, from the shifting of the sands. The south sand that commences near Point King, forms the south side of the channel, its eastern end bears S. W. $\frac{1}{2}$ S., (mag.), from the white cliff, and to the eastward of that, deep water extends close to the shore.

"The northern side of the channel is formed by the middle ground, the western end of which bears N. $\frac{1}{2}$ E. (mag.) from Point King, and extends seven miles eastward when Station Peak is on with Indented Head bearing N. W. by W. (mag.), and White Cliff S. W. by W. $\frac{1}{2}$ W., you are clear of the middle ground, and may steer to the northward. Symond's Channel may be made available in N. or N. W. winds, when unable to fetch through the western channel, but is not recommended for any but small vessels until it is buoyed. The Pinnace Channel is only suitable for small vessels, the deepest water will be found close along the edge of the great sand. To pass clear of the shoals to the northward, keep Station Peak on with the extreme of Indented Head, and do not shoal the water under nine fathoms. From the edge of the bank over the area of Port Phillip, to within a mile of the shore, there is deep water every where, with the exception of the Prince George Bank off Indented Head, and in running and beating towards Hobson's Bay, at the northern extremity of the port, there is nothing to apprehend. Steer in for Point Gellibrand and pass it at two cables' length distance, taking care in so doing not to shoal the water under five fathoms, and to anchor when you bring Point Gellibrand to bear S. S. W. in four-and-a-half fathom water; small vessels may bring it to bear south in two fathoms. A light-house is now erected on this point,

which will at night direct strangers to the anchorage, independent of the lights of the town and numerous shipping. If you are bound into Geelong harbor from sea, be careful to give a berth of at least two miles from Indented Head to avoid the Prince George Bank, which extends from it in a N. E. direction. In rounding the shoal on the east and north sides do not shoal the water under seven fathoms until Point Richard bears W. by S., you may then haul up for Point Henry.

"Do not approach the northern shore nearer than one mile, and in passing Point Wilson keep Point Henry to the westward of W. by S. (mag.) ; one mile east, or E. by S. from Point Henry, there is tolerable good anchorage. On the bar at the head of Geelong harbor you cannot insure more than seven feet at high water ; at a cable's length within the bar there are five fathoms, and the depth may be carried close up to the shore ; the rise and fall of the tide does not exceed four feet in any part of the port, and more commonly it does not rise beyond two feet six inches on the springs ; both the time of high water, and the extent to which it rises, are greatly influenced by the wind ; the force of the tide through the channels leading to the north from the mouth may be estimated at from two to three miles per hour ; in the south channel it runs with less force, and in the wide expanse northward of the banks it is scarcely perceptible. When it acquires its greatest strength it is not safe for any open boat to venture out, but it is easy to conceive the rapidity with which it must run to raise the level of 875 square miles of water four feet by means of so small an embouchure."

CHAPTER VI.

CUSTOMS' DUTIES AND CHARGES.—PILOTAGE.—WHARFAGE RATES.—TONNAGE AND HARBOR DUES.—STORAGE, ETC.

THE customs duties form the largest items of revenue. Until the 6th of July, 1849, there was a differential tariff in South Australia; but under the authority of the Imperial Legislature, the Colonial Legislative Council from the above date adopted a uniform tariff on the importation of the goods and produce of all countries alike. The duties levied on the principal articles are—manufactures of cotton, silk, wool, and linen, *five per cent. ad valorem*; also on arms, apparel, baskets, boats, brass manufactures, brooms and brushes, clocks and watches, copper manufactures, cutlery, earthenware, furniture, gloves, grindery, hair manufactures, iron manufactures unenumerated, implements and tools, lead manufactures, machinery, matting, musical instruments, netting, paper stained and hangings, perfumery, pewter ware, pictures, pipes not of common clay, plate and plated goods, saddlery and harness, stationery, tin ware, *five per cent. ad valorem*. On all other articles the duties are as follows:—

Alkali, 6d. per cwt.	Boots, 6d. per dozen pairs.	Wheeled wagons and timber carriages, 20s.
Annatto, 3s.	Half boots, 3s.	
Arrowroot, 3s.	Shoes, 2s.	Carriages 5 per cent. ad valorem.
Bacon and hams, 2s. 6d.	Children's, 1s.	
Bags and sacks—corn, 5s. per 100 ; ore, gunny and returned, 6s. 6d.	Bread and biscuit, 7d. per cwt.	Empty casks, 2s. per tun.
Bales for wool, 2d. each.	Glass and stone bottles, 1d. per dozen.	Cement, 4d. per cwt.
Beef and pork, 1s. 6d. per cwt.	Fire and Bath bricks, 5s. per 1,000.	Chalk, 1s. 6d. per ton
Beer, porter, ale, cider, and perry, 3d. per gallon.	Other bricks, 2s.	Cheese, 3s. per cwt.
Liquid blacking, 4d. per gallon.	Brimstone, 6d. per cwt.	Chocolate and cocoa, 1d. per lb.
Paste blacking, 1d. per lb.	Butter, 3s.	Coals, 9d. per ton.
Printed books, 6s. per cwt.	Chain cables, 1s. 6d.	Coke, 2s.
Barrows and trucks, 1s. each.	Tallow candles, 3s.	Coffee, 4s. per cwt.
	Wax, composition, sperm, &c., 6s.	Confectionery, 2d. per lb.
	Canvas, 2s. per bolt.	Copper, sheathing and nails, 5s. per cwt.
	Carts and drays, 10s. each.	Cordage and rope, viz., Europe, 2s. per cwt.
		Manilla, 1s. 6d.

Coir and Jute, 9d.	Grease, 1s.	Hogskin, 1s. each.
Unenumerated, 1s. 6d.	Sporting gunpowder, in cannisters, 5s. per cwt.	Basil, 6d. per dozen.
Small cord and twine, 5s. per cwt.	Blasting, 2s. 3d.	Enamel, 3s. 6d. per hide.
Cork, 2s.	Groceries, 5 per cent. ad valorem.	Lime and lemon juice, and syrup of all sorts, 3d. per gallon.
Corks, 1d. per gross.	Haberdashery and millinery, ditto.	Lucifers, 4d. per gross of boxes.
Corn, meal, and flour, viz., wheat, 1s. 6d. per quarter.	Hosiery, ditto.	Maccaroni and Vermicelli, 1d. per lb.
Barley, 1s. 3d.	Curled hair for upholsterers' use, 1d. per lb.	Mats and matting, 5 per cent. ad valorem.
Oats, 1s. 3d.	Hats and Caps, 5 per cent. ad valorem.	Musical instruments, ditto.
Maize and millet, 1s.	Hay, 2s. per ton.	Mustard, 1d. per lb.
Peas, beans, and pulse, 1s. 6d.	Dressed hemp, 1s. 6d. per cwt.	Needles, 3d. 1,000.
Malt, 3s.	Undressed tow and oakum, 1s.	Nuts, viz., almonds, walnuts, chestnuts, filberts, and small nuts, 2s. per cwt.
Flour and meal, 1s. per 100 lbs.	Dressed hides, 3.	Shelled almonds, 4s.
Bran and pollard, 3d. do.	Raw, salt, and dried, 1s.	Cocoa, 6d. per cwt.
Cutlery, 5 per cent. ad valorem.	Honey, 4s.	Oil, black, 1d. per gallon.
Drapery, ditto.	Hops, 2d. per lb.	Sperm, head-matter, and other fish or animal oil, 3d.
Drugs—corrosive sublimate, 2d. per lb.	Writing ink, 3d. per gallon.	Linseed, rape, hemp, and cocoa-nut, 2d..
Spirits of tar, 1d. per gall.	Printing ink, 1d. per lb.	Olive, castor and other vegetable oils, 6d.
Vitriol, 1d.	Iron, viz., bar and rod, 10s. per ton; sheet and hoop, 14s.; pig, 5s.; sledges, anchors, anvils, plates, cart-arm moulds, and articles of wrought iron, heavy and in the rough, 1s. per cwt.; cart-arms and boxes, finished—chain, articles of wrought iron, finished, 1s. 6d.; camp ovens, pots, boilers, and castings, 10d.;	Oilman's stores, 5 per cent. ad valorem.
Unenumerated drugs, 5 per cent. ad valorem.	Refined isinglass, 6d. per lb.	Onions, 1s. per cwt.
Other unenumerated and manufactures, ditto.	Common for manufacture, 2d.	Paints, 1s.
Bed feathers, 1d. per lb.	Implements and tools, 5 per cent ad valorem.	Painters' colors, and whitening, 6d.
Dry and pickled fish, 1s. per cwt.	Jewellery, ditto.	Brown paper, wrapping, and blotting, 3s. per cwt.
Flax, 1s.	Old junk, 1s. per cwt.	Printing and cartridge 5s.
Dried fruits of all sorts, 2s. In bottles, 6d. per dozen quarts.	Lard, 2s. 6d.	Writing 1d. per lb.
Preserved in sugar, succades, and jams of all sorts, 1d. per lb.	Lead, viz., pig, sheet, and shot, 1s. per cwt.	Other unenumerated manufactures, 5 per cent. ad valorem.
Fresh, 6d. per bushel.	Leather, sole, 3s. per cwt.	Parchment, 3s. per roll.
Plate glass, in squares exceeding 600 inches, 4d. per lb.; not exceeding 600 inches, 3d.	Kip and Harness, 6s.	Percussion caps, 2d. per 1,000.
Crown and sheet, in sqrs. not exceeding 200 inches, 2s. per 100 feet: not exceeding 200 inches, 1s. 6d.	Calf, 1d. per lb.	Pickles and fruit preserved in salt, 4d. per gallon.
Flint glass, cut, cast, mirrors, and manufactures, 5 per cent. ad valorem.	Patent Basil, 5s. per doz.	Tobacco pipes, of common clay, 1d. per gross.
Glue, 1s. 6d. per cwt.	Kangaroo, 1s.	Pitch, 1s. per barrel.
		Potatoes, 3s. per ton.
		Provisions and preserved meats, 3s. per cwt.

AUSTRALIA.

Pins, 1d. per lb.	Spirits, cordials, or strong waters, sweetened or mixed with any article so that the degree of strength thereof cannot be exactly ascertained by Syke's hydrometer, 10s.	Spirit of turpentine, 2d. per gallon.
Rice, 9d. per cwt.		Vinegar, 1d.
Rosin, 6d. per barrel.		Whalebone, 14s. per cwt.
Sago, 1s. per cwt.		Wine, 1s. per gallon.
Salt, 3s. per ton.		Wood, viz., posts and rails, handspikes, and poles, 1s. 6d. per 100.
Saltpetre, 1s. 6d. per cwt.		Paling, 6d.
Skins for tanning, 4d. per dozen.		Shingles and laths, 6d. per 1,000.
Soap, 1s. per cwt.	Starch, 2s. per cwt.	Trenails and spokes, 2d. per 100.
Spices, viz., cassia, 3s. per cwt.	Steel, 2s.	Oars, 2s. per 100 feet.
Cinnamon, 2d. per lb.	Stones—millstones, 2s. per foot diameter.	Square timber, and balks, spars, deals, battens, quartering, planks, boards, and sawn, hewn, or split timber of all kinds, not otherwise particularly enumerated or described, 2s. 6d. per 40 cubic feet.
Cloves, 1d.	Grindstones, 1d.	Manufactures of wood, 5 per cent. ad valorem.
Mace, 2d.	Roofing slates, 3s. 6d. per 1,000.	Zinc, and manufactures of ditto, ditto.
Nutmegs, 2d.	Slabs and flag-stones, 1s. per 100 feet superficial.	Unenumerated articles, raw and manufactured, 5 per cent. ad valorem.
Ginger, 2s. per cwt.	Tomb and wrought stones, 1d. per foot ditto.	N.B.—Animals, living.
Pepper, 1s. 6d.	Marble, wrought, 6d. ditto.	Baggage of passengers.
Other spices, 5 per cent. ad valorem.	Bluestone, 5s. per cwt.	Bottles imported full.
Spirits or strong waters of all sorts, viz., for every gallon of such spirits or strong waters of any strength not exceeding the strength of proof by Syke's hydrometer, and so in proportion for any greater or less strength than the strength of proof, and for any greater or less quantity than a gallon.	Refined and candy sugar, 4s. per cwt.	Bullion and coin.
Also, perfumed spirits not being sweetened or mixed with any article so that the degree of strength thereof cannot be exactly ascertained by such hydrometer, 10s. per gallon.	Muscovado, 2s.	Plants and trees.
	Molasses, 2s.	Seeds and roots, garden.
	Tapioca, 2s.	Specimens illustrative of natural history, and wool unmanufactured are imported free.
	Tallow, 2s.	
	Tar, 1s. per barrel.	
	Tea, 2d. per lb.	
	Tin-plates, 2s. per box.	
	Tobacco manufactured, 2s. per lb.	
	Unmanufactured, 1s.	
	Cigars and cheroots, 5s.	
	Snuff, 2s.	
	Boiled down in bond for sheepwash, 1d.	
	Toys, 5 per cent. ad valorem.	
	Tuinery and woodenware, ditto.	

The duties and charges vary slightly at different ports in the island.
They are :—

AT SYDNEY.

Customs.—Duties levied under the authority of Acts of Parliament
—(1.) Upon all spirits made or distilled in the colony, 3s. 6d. per gallon ; (2.) Upon all rum or whiskey imported, 3s. 6d. per gallon ; (3.) Upon all other spirits and liquors whatsoever imported, 6s. per gallon ;

(4.) Wine imported, fifteen per cent. additional value ; (5.) Tea, sugar, flour, meal, wheat, rice, and other grain and pulse imported, 5s. per cent. additional value ; (6.) Tobacco, unmanufactured, 1s. 6d. per lb. ; (7.) Tobacco, manufactured, 2s. 6d. per lb. All other goods, wares, and merchandise, not being the produce or manufacture of Great Britain, imported into the colony, ten per cent. additional value.

There are also wharfage rates levied at public and private sufferance wharfs, and on all descriptions of goods imported : for instance, at public wharfs, on beer per hhd. 6d. ; on wine or spirits, 1s. per leaguer ; on sugar, 1s. 4d. per hhd. ; on unenumerated goods, 2s. 4d. per ton. There is also a rate levied of one halfpenny per ton per diem on vessels unloading or refitting, beyond a certain number of days ; for instance, thirty-five days are allowed free for a ship of 500 tons.

Custom House Charges.

Description.	Custom House Charges.				Light House Dues.	
	Entry.		Clear.		Per ton.	
	1s.	3d.	1s.	3d.	0s.	0½d..
For the entry inwards or clearance outwards of ships or vessels (vessels under 50 tons registered in Sydney excepted) ; for any steam vessels in the coasting trade from one port to another of New South Wales . . .						
For every other vessel so emp-tied above 50 and not ex-ceeding 100 tons . . .	2	6	2	6	2	0
For every other vessel so emp-tied above 100 tons . . .	7	6	7	6	0	2
For every other ship or vessel	15	0	15	0	0	2

A *Tonnage Duty* is levied of 3d. per ton on all vessels above fifty tons entering any port in the colony, unless the same shall have been paid at any other port of the colony within the previous four months. Coasting vessels pay only once a year.

Harbor Dues, varying from 5s. on vessels under fifty tons, to 30s. on vessels of 500 tons and upwards, are levied on entry of harbor, or on shifting anchorage, not for the purpose of leaving port. Coasting ves-sels from one port of the colony to another exempted.

PORT PHILLIP.

The custom duties levied at Port Phillip are of the same amount as those enacted for Sydney, New South Wales. Fifteen shillings per foot is charged on all vessels inward or outward bound as pilotage dues, besides harbor dues. One shilling per bale is charged for shipment of wool from Melbourne to Hobson's Bay (the shipping port), and 5s. per ton for general goods.

SOUTH AUSTRALIA (OR ADELAIDE).

Customs' Storage.—Ample accommodation is provided by the government at this port for the storage of goods in bond, for which the following are the weekly rates of storage:—For every pipe or puncheon. 1s.; hogshead or half-pipe, 6d.; barrel or quarter-cask, 3d.; tierce, 4d.; six-dozen bottle cases, 6d.; three-dozen ditto, 3d. Any less or greater quantity to be charged in proportion to the above scale.

The powder magazine is situated on La Fevre's Peninsula, opposite Port Adelaide, where powder is stored at the following rates:—For each barrel containing 50 lbs., for not more than six weeks, 1s.; above six weeks, per week, 2d.; containing less than 50 lbs., for not more than six weeks, 6d.; above six weeks, per week, 1½d.

Rates of Pilotage.—For every vessel taking a pilot, £2; and in addition for every foot of draft of water above nine feet, 10s.; vessels employing the steam tug have one-fourth of their pilotage remitted. *Harbor Services*—Mooring, unmooring, and removing vessels above 70 and under 100 tons, 10s.; if 100 tons register, 15s.; and for every 20 tons above 100 tons, 1s. In addition to the above, 1s. per hour for each man in the harbor department employed in the above service. The charges for the use of the steam tug for towing in or out of harbor any vessel of 200 tons register or less, £5; and for every ton over 200 tons, 6s.

Dues on entry and clearance, wharfage and pilotage, were abolished in 1845. The storage charges at Port Adelaide are, for every pipe or puncheon, weekly, 1s.; hogshead or half-pipe, 6d.; barrel or quarter-cask, 3d.; tierce, 4d.; six-dozen bottle case, 6d.; three-dozen ditto, 6d.

All British vessels of war, hired transports, merchant ships freighted wholly or in part by government, vessels of the royal yacht squadron, and ships of war belonging to friendly nations, are exempt from all pilotage, dues, &c.

CHAPTER VII.

LICENSES.—POSTAGE.—COINS.—WEIGHTS AND MEASURES.—AGENCY.—COMMISSIONS.—INSURANCE, ETC.

THE following are the duties charged on various licenses throughout the colony.

AT SYDNEY, NEW SOUTH WALES.

Annual: auctioneers, for all the colony, £15; for a police district, only £2; publicans, general, £30; wine and beer only, £10; billiard table, £10; to keep open after nine o'clock at night, £10; packet license, for wines, &c., £2; confectioners, for ginger and spruce beer, £1; distilling, £50; rectifying and compounding, £25; hawkers and pedlers, £1; stage carriage, 5s.; carters, 2s 6d.; porters and boatmen, 5s. each.

To cut timber on vacant crown lands, annually, £2, except cedar, which is £4.

The tolls and ferries in the colony are numerous, and the rates levied about the same as in England. The rate of customs duties is stated under *Commerce*. There is an extensive list of fees, which are exacted in the different public offices in the colony, civil and ecclesiastical, and carried to the credit of the public revenue.

Auction duty.—Ten shillings on every hundred pounds sterling of the purchase money.

Postage of letters.—Weighing less than half-an-ounce, not exceeding fifteen miles, 4d.; twenty, 5d.; thirty, 6d.; fifty, 7d.; eighty, 8d.; one hundred and twenty, 9d.; one hundred and seventy, 10d.; two hundred and thirty, 11d.; three hundred, 1s.; for every hundred miles above three hundred, 1d. By sea, from one part to another of the colony, 4d.; colonial newspapers, within the colony, for seven days, transmitted once as a single letter. Ship letters, for receipt or dispatch, in addition to inland postage, 3d., 6d., 9d., or 1s., quadruple.

The Coins in circulation are the gold, silver, and copper coins of Great Britain, which bear the same current value as in England.

Weights and Measures as in England.

General rates of agency, commission, and warehouse rent, agreed on at a meeting of the New South Wales Chamber of Commerce :—

Commission per cent.—On sales or purchases of ships and other vessels, houses or lands, where no advance on them has been made, $2\frac{1}{2}$; on all other sales, purchases, or shipments, 5; on goods consigned, and afterwards withdrawn, or sent to public auction, if no advance on them has been made, $2\frac{1}{2}$; on giving orders for the provision of goods, $2\frac{1}{2}$; on guaranteeing sales, bills, bonds, or other engagements, $2\frac{1}{2}$; on the management of estates for others, 5; on procuring freight or charter on passage money, and on freight collected, 5; on insurances effected, $\frac{1}{2}$; on settling losses, partial or general, 1; on effecting remittances, or purchasing, selling, or negotiating bills of exchange, 1; on the recovery of money, $2\frac{1}{2}$; if by law or arbitration, 5; on collecting house rent, 5; on attending the delivery on contract goods, 2; on becoming security for contracts, 5 on ships' disbursements, 5; on obtaining money on respondentia, 2; on letters of credit granted, $2\frac{1}{2}$; on purchasing, selling, receiving from any of the public offices, lodging in ditto, delivering up, or exchanging government paper, or other public securities, $\frac{1}{2}$; on all items, on the debit or credit side of an account on which a commission of 5 per cent. has not been previously charged in the same account, including government paper, 1; on entering and clearing ships at the custom-house, each 1 guinea.

Warehouse rent.—On all measurement goods, 1s. per ton of 40 cubic feet per week; on liquids, 1s. 1d. per tun of 253 gallons (old measure) per week; on sugar, rice, salt, and similar articles, 6d. per ton per week; on grain 4d. per bushel for first month, and $\frac{1}{2}d.$ per bushel per week afterwards; on iron, lead, &c., 4d. per ton per week.

The following are the premiums charged by the Australian Marine Assurance Company, for insuring vessels and merchandise:

Per cent.—Sperm fishery, for 12 months, 8 to 10 guineas; ditto for the voyage, 8 to 14 guineas; Hobart Town, to or from, 1 guinea; Launceston, ditto, $1\frac{1}{4}$ guinea; New Zealand and South Sea Islands, per month, 1; Manilla and China, to $2\frac{1}{2}$ from 3; Madras, Bombay, and Calcutta, to or from, not including risk through Torres Straits, 3; Mauritius, ditto, ditto, 2 to 4; Cape of Good Hope, ditto, ditto, $2\frac{1}{2}$; United Kingdom, ditto, exclusive of war risk, $2\frac{1}{2}$ to $3\frac{1}{2}$; Rio de Janerio and Bahia, ditto, ditto, $2\frac{1}{2}$.

CHAPTER VIII.

THE GOVERNMENT AND COURTS OF LAW.

IN 1842, (30th July), under the act 5 & 6 Victoria, c. 76, a Legislative Council of thirty-six members was created, of whom one-third was nominated by the Queen of England, and two-thirds elected by the colonists, on whom an elective franchise was conferred, namely, an estate of freehold in possession in lands of the value of £200 sterling, or the occupation of a dwelling house of the annual value of £20 sterling. No person is qualified to vote unless he had arrived at the full age of twenty-one years, a natural born or naturalized subject of England ; and if he had been attainted or convicted of treason, felony, or infamous offence, unless he had received a free pardon, or one conditional on not leaving the colony, or had undergone the sentence or punishment to which he had been adjudged for such offence. Voters to be qualified must have been in possession of estate, or occupancy of house, at least six calendar months before the date of election, and have paid up all rates and taxes payable by him as owner, in respect to such estate or house, which shall have become payable during three calendar months next before election or registration. The qualification of elective members of council was fixed at an estate of freehold, in lands in New South Wales, of the yearly value of £100 sterling, or of the value of £2,000 sterling, above all charges and incumbrances effecting the same. Under this act, the legislature then in operation was authorized to make all necessary provisions for dividing the colony into convenient electoral districts ; for issuing, executing, and returning the necessary writs for such elections ; for determining the validity of disputed returns, and other such matters. The district of Port Phillip was to return at least five members : the town of Melbourne, in Port Phillip, one ; and Sydney, New South Wales, two members.

The Governor and Legislative Council were, by this act, authorized to make laws for the peace, welfare, and good government of the colony,

provided such enactments were not repugnant to the laws of England, and did not interfere in any manner with the sale or other appropriation of the lands belonging to the crown in the colony, or with the revenues thence arising.

The taxes, duties, rates, and imposts levied in the colony, were declared to be appropriated to the public service within the colony, by ordinances to be enacted by the Governor, with the advice and consent of the Legislative Council.

The foregoing are the leading points in the act 5 & 6 Vict., c. 76. Under it the Legislative Council was established, and now holds its annual sittings; and Sydney and Melbourne were created corporations by charter: they have each a mayor and court of aldermen, who have exercised beneficially the duties intrusted to them, and contributed to the welfare of the inhabitants of each city.

COURTS OF LAW.

The Statute Laws of England are in force in Australia, aided by Acts of Parliament and local enactments by the Governor and Legislative Council. An Insolvent Debtors' Act is in operation, the benefit of which may be obtained by an insolvent a second or third time, if he pay fifteen shillings in the pound.

The execution of the laws devolves upon a supreme court, presided over by a chief and two puisne judges.

The supreme court is a court of *oyer and terminer, and jail delivery*; it is also a court of *equity*, with all the power, within its jurisdiction, of the lord high chancellor of England; and it is a court of *admiralty* for criminal offences, within certain limits; it is empowered to grant letters of administration, and it is an insolvent debtors' court. From the supreme court, appeal lies in all actions, when the sum or matter at issue exceeds the value of £500, to the governor or acting governor, who is directed to hold a court of appeals, from which a final appeal lies to the Queen in council.

Circuit courts are held in different parts of the colony.

A Vice Admiralty court, presided over by the chief-justice of the supreme court, takes cognizance of civil cases only, such as seamens' wages, &c.

Courts of requests have been established for summarily determining claims not exceeding £10 sterling.

Imprisonment for debt was abolished by the Insolvent Act passed in 1844. By the assent of a majority of the creditors, a debtor under this act may make a voluntary assignment of his property to the trustees appointed by the creditors, provided such assignment be published three times in one of the Sydney newspapers.

In the earlier stages of the colony, criminal juries were formed of naval and military officers, and civil causes were determined by a judge and two sworn assessors. Now juries, selected as in England, sit in all civil and criminal cases. In 1844 a new jury law was passed by the colonial Legislative Council, by which in civil cases there need only be four jurymen ; if, after deliberating four hours, they cannot arrive at a unanimous judgment, the opinion of three-fourths may be taken as conclusive ; and if, after deliberating twelve hours, the jury of four cannot agree, a new trial must take place. Mr. Baker, an English lawyer, who visited New South Wales, says that the "Sydney bar is highly respectable in character, and is, certainly, the most numerous, and perhaps, taken as a whole, the best English bar out of England ; several of its members earn from £1,000 to £3,000 a-year, or more." Mr. Baker fancied himself "transported to England," on entering the supreme court at Sydney, and seeing three judges on the bench, the registrar and other officers at their feet, the attorney-general and solicitor-general in their silk gowns, the crowd of "learned" gentlemen behind them ; all from the judges downwards, duly wigged and robed, and the attorneys, hardly discernible from amidst the heaps of red and blue bags, and piles of red-tape bundles, in which they delight to bury themselves. Coroners are stationed in different districts, and great attention is paid to this ancient and very important branch of jurisprudence. There are benches of unpaid magistrates at Sydney and in all the principal towns in the colony, aided by civil constables and a mounted police. There are several stipendiary magistrates.

CHAPTER IX.

ZOOLOGY, ORNITHOLOGY, AND ENTOMOLOGY.

NATIVE ANIMALS.

THE native animals of Australia are few in number, and very peculiar in kind. Of all the known mammalia, but fifty-eight species, or about the one-seventeenth part of the whole, belong originally to this region; and of these, more than one-half are of the *marsupial* order. Of Cuvier's order of *carnivora*, if we except the marine mammals of the seal genus (*phoca*), the dingo, or native dog, is the sole representative, and the important orders of *quadrumana*, *pachydermata*, and *ruminantia*, appear to be without any land representatives in this large portion of the globe. Of the *edentata*, the genera *echidna*, and *ornithorhynchus*, are destitute of teats, and do not suckle their young. The former genus (*echidna*), consists of two species of porcupines, one entirely covered with thick spines, the other clothed with hair, in which the spines are half hidden. The *ornithorhynchi* consist also of two species — *O. rufus* and *O. fuscus*. These creatures unite with the body, the fur, and habits of a mole, the webbed foot and bill of a duck; are ovoviparous, and have the internal formation of a reptile. They are very shy, and lead a burrowing life in the mud of rivers and swamps.

Of the *rodentia*, two species belong to the sub-genus *hydromys*, and consist of creatures that seem to unite some of the peculiarities of the dormouse, rat, and beaver. A new genus of *rodentia*, discovered by Mitchell, and called by him the flat-tailed rat, is remarkable for the enormous nest of branches and boughs, which it builds so strongly, as to be proof against the attacks of the dingo, or native dog. The rabbit rat, which climbs trees like the opossum, is described by Mitchell, as having feet resembling those of a pig, the marsupial opening downwards, instead of upwards, as in the kangaroo, and about the size of a rabbit, but without a tail. Two species of mice (both peculiar), and the *dipus Mitchellii*, Australian jerboa, are included in the list of *rodentia*, and

the *mymecobius rufus*, or red shrew-mouse, is sometimes considered as belonging to that order. With these few exceptions, the whole of the Australian mammalia are of the *marsupial* order, of which there are many species; the only character common among them being what has been termed the premature production of their young; for even in the few kinds of *marsupialia* not possessed of pouches, the young hang to the *mammæ* of the mother for a considerable time. The most numerous and important are the several varieties of the well-known kangaroo (*macropus*), one species of which (*macropus unguifer*), has the singular appendage of a nail, like that on the little finger of a man, attached to its tail; the others are the different species of opossums, bandieoot, or pouched badger, a sort of sloth (*phascolarctos*), the wombat (*phascolomys*), an animal about the size of a badger, and very slow in its movements, and the kangaroo rat (*pataroo*), a diminutive kangaroo.

BIRDS.—The list of Australian birds presents but two orders, wholly peculiar, namely, the *syndactyles*, of which the most beautiful are “the sacred kingfisher,” the variegated bee-eater, the charming little trochilus, or humming bird, and the *scansores*, consisting of parrots, parroquets, cockatoos, &c., which are very numerous, and adorned with every variety of gorgeous plumage. Among the order *accipitres*, is a species of vulture, so fierce, that when pressed by hunger, he has been known to attack the natives themselves. The white eagle is also a very rapacious bird. The cream-bellied falcon, the orange-speckled, and the milk-white hawk, are common varieties; the last especially makes great havoc among the poultry. Of the owls, the most numerous is the bird called the cuckoo by the colonists, and “buck-buck” by the natives, from the cry which it reiterates during the winter nights. The order *dentirostres* includes a beautiful bird, having the habits of the red-breast; several varieties of the thrush, one of which has obtained the soubriquet of the *laughing juckass*; a description of field lark, and the wattle bird, which utters a chattering note; swallows and goat-suckers, of the order *fissirostres*, are numerous.

Conirostres.—There are several magpies and crows of this order, and beautiful birds of paradise, but the latter, like the various species of *epimachi*, are confined to northern Australia.

Gallinæ.—Pheasants, quails, and pigeons are in considerable numbers, of the latter the most remarkable variety is the *bronze-winged*.
Grallæ.—The cassowary or emu is found in nearly all parts of Australia. It is a very wild creature, and runs more swiftly than an English greyhound. The eggs are of an elongated form, and of a green color; the

flesh though coarse is eatable, especially that of the young. Australia has also some species of bustard, curlew ibis,—some of a glassy rifle-green; herons, avasets, rails, snipes, spoonbills, &c.

Palmipedes.—The black swan is found here. Gannets or boobies are numerous, especially on the north coast, where penguins, petrels, and ducks also abound. The *cereopsis* somewhat resembles the goose. Vampires of a large size are numerous.

The habits of the Australian birds are most peculiar; one, commonly called the *bower bird*, builds for itself a kind of roofed and sheltered pleasure-ground (see Gould's *Australian Birds*); another, the *megapodius tumulus*, constructs a nest in the form of an irregular truncated cone on an oblong base, one of which Captain Stokes found to measure 150 feet in circumference; the slope of its sides being from eighteen to twenty-four feet, and its perpendicular height ten or twelve feet. It was composed of earth, fragments of coral or stone, and pieces of stick. On examining these mounds by clearing away three or four feet of earth, the eggs of the bird were found, measuring eight and a half inches lengthwise in circumference, and six and three-quarters across. There was no increase of temperature in the mound.

REPTILES.—The reptiles of Australia consist of two or three genera of turtles; as many varieties of alligators, a considerable number of lizards and serpents, both venomous and harmless. The great *lacertæ*, as alligators, &c., do not appear to have been found in Western Australia. The land-lizard, and the crimson-sided snake (*Coluber-porphyriacus*), are of extraordinary beauty. Serpents, also, of different species, have been seen floating upon the water, in chase of the curious ponquin. Frogs are numerous. A variety of lizard (the *chlamydosaurus Kingii*) is remarkable for a frill behind the head and above the shoulders.

INSECTS.—The insects are very numerous, and many of the butterflies, moths, and beetles, are brilliant and beautiful. Locusts abound in the hottest season. In swampy places mosquitoes are extremely troublesome, but they are scarcely known in the upper lands. Scorpions and centipedes are found among dead wood. Wild bees swarm in many places, depositing their delicious honey in the hollow trees. Flies, especially the blow-fly (*musca carnivora*) are numerous in some districts. The gum-grub, an insect about six inches long, is esteemed by the natives a great dainty, and there are various species of ants in Australia, some of which are provided with wings. Ant hills have been found measuring thirteen feet in height, and seven at the base, tapering gradually to the summit.

CHAPTER X.

THE NEW ERA.—RECENT DISCOVERIES AND THEIR RESULTS.—FUTURE PROSPECTS.—HINTS TO EMIGRANTS, ETC.

In the previous portion of this work, the progress and condition of the Colony or Colonies of Australia has been traced, and, as far as our space allowed, their commercial and statistical state described, up to the recent discoveries, when a new era commences.

It has before been stated that many scientific men were of opinion that gold was extensively to be found there; amongst others, by Sir R. I. Murchison; but England having on former occasions experienced the baneful effects of gold-seeking in what proved to be unproductive regions, the idea of its existence was not encouraged, and on the contrary the representations of these gentlemen, although to a certain extent indubitable, were rather concealed than made known to the public.

DISCOVERIES IN NEW SOUTH WALES.

In the early part of February, 1851, however, Mr. E. H. Hargrave, a resident of Brisbane County, lying about 100 miles N. W. of Sydney, chief town of New South Wales, having a short time before returned from California, expressed his conviction that from the similarity of the formation between the two places, gold must be abundant in the former. The subject was brought under the consideration of government, and Mr. Stutchbury, the geological surveyor, was dispatched to the district, and his report fully confirmed the statements of Mr. Hargrave.

In spite of all attempts at suppression, the news rapidly spread, and the greatest apprehension prevailed throughout the colony, that the most disastrous consequences would ensue from the desertion of their own pursuits by all classes of society for the more alluring prospects of the gold field.

The researches from this time up to May seem to have been confined to the Wellington and Bathurst districts, the accounts from which were very satisfactory ; and in the following month (June) about one hundred fresh adventurers arrived daily at the diggings. Up to this time several large pieces had been found, varying in size from one ounce to three pounds, and one lump was found weighing seven pounds, at the Ophir diggings, which are several miles back from the creek.

At the close of this month several new gold fields were discovered, the most prolific being the Turon, lying on the banks of that river. Here it was that Dr. Kerr, on the information of a black shepherd, found three blocks of quartz weighing about 224 lbs. ; the largest of these was about a foot in diameter, and weighed 75 lbs. gross, and yielding 60 lbs. of fine gold. The pure gold from the three blocks, when weighed at Bathurst Bank, amounted to 106 lbs., and sold for £4,240 sterling, equal to \$21,200.

DISCOVERIES IN VICTORIA, OR PORT PHILLIP.

The success of gold mining in the Bathurst and Wellington districts, induced the offer of large sums of money in the shape of rewards for the discovery of gold in other parts. This was especially the case in the colony of Victoria, or Port Phillip, and the search there was crowned with success also.

In the month of September, gold was found at Ballarat, near Geelong, and almost simultaneously it was found at Mount Alexander, seventy miles from Melbourne. The excitement here was much greater than at Sydney, owing principally to the easy distance of both places to the two Chief Townships ; and such was the great influx of immigration from all parts, that it was not unusual for hundreds of persons to arrive in one day ; and even at this period, in one day 1000 arrived.

PROGRESS OF EMIGRATION.

Towards the end of the year, several vessels arrived from California freighted with Americans and some returned colonists. They principally proceeded to the Turon, Ophir, and other diggings in New South Wales, before discovered and better known, and were eminently fortunate. At this time it was calculated that at least 30,000 men were spread over the large extent of country in both colonies where gold discoveries had been made.

A panic arising from the fears that I have before described was the consequence, but this has happily subsided.

RESULTS.

The first results of the Australian gold discoveries are now displayed in a tangible, unmistakable shape—individual loss, individual suffering, by the diversion of capital and labor. There may be many carried away by mere enthusiasm, who will rue the day they abandoned the certain easy employments of civilized life for the hard navigator-like trade of a gold-seeker; but the advantage of this new mineral discovery is unquestionable, in spite of all that croakers may say and sing.

Up to the middle of May, 1851, as heretofore shown, the colonial heart beat high with hope. Trade was good; the pastoral interests were flourishing; the country properties, as a matter of course, were improving; and the introduction of the alpaca, the extended culture of the vine, and the growth of cotton, appeared to present new and rich sources of wealth. At that moment came the discovery of the gold fields; and a shock was communicated to the whole industrial system, which to some people seemed to threaten almost annihilation. The idea was, that gold-digging would swallow up all other pursuits, and the flocks perish in the wilderness from the want of shepherds. Nor was this altogether without foundation; for the stockholders have actually been considerable sufferers: all the industrial projects mentioned have been stopped short; and the gold-diggings still continue to attract to themselves, as if by a spell, the labor of the country. The panic, however, has now subsided. It is seen that the result is not so bad as was anticipated, and it is now rendered evident that the evil will go no further. A stream of population, it is thought, will be directed to Australia from abroad, and the labor not demanded by gold may suffice for other pursuits.

Already upwards of two millions sterling have been realized by the rude exertions of part of a population which has never yet exported more than three millions of raw produce; and with the evidence now before us, we may confidently assert, that although there will be a temporary diminution in the exportation of Australian wool under new arrangements, the flocks of Australia will not be destroyed.

The Australian population have stood the test of gold wonderfully, and come out of the trial with honor. Their conduct, as a body, has been singularly orderly and submissive to the constituted authorities.

Two very healthy signs are displayed by the Australian diggers—the multiplication of marriages and the large consumption of the best articles of female attire.

At Port Phillip it is impossible to retain a tidy servant girl. The first luxury to which the successful gold-seeker treats himself on his return for a holiday is a wife, and the wife is then treated to the best gowns and shawls that the shops afford. A friend writes that “the carpenters and smiths of Melbourne and Geelong will not let their wives be seen in a gown of less cost than ten pounds, with a shawl and bonnet to match.”

Whatever may be the taste of the workers from the Turon or Braidwood, Ballarat and Mount Alexander, it is certain that what they purchase they honestly pay for, and no one will suffer for their gains. The advantage, in a commercial point of view, is obvious. The man who was earning before £20 or £40 a-year, of which, perhaps, he spent one-half in manufactures, can now afford to spend—and does spend—from £100 to £500 a-year. The tales of wild extravagance are grossly exaggerated, and not at all to be depended upon. On the best authority, we can assert that the colonists are spending and investing their money in a very creditable manner. Among other proofs may be cited the circumstance of two thousand pounds received in gold-dust in less than seven weeks after his arrival at Port Phillip, by Captain Chisholm, from working men, to pay the passage of their relatives.

Now that so strong a stream of self-paid emigration is flowing, the sooner the Government free emigration is given up the better for the mother country and for the colonies. Many a man *does not save* as he *could*, to pay his own passage, because he hopes to win a prize in the Government lottery.

Education, and free, liberal education, is in truth the only thing required in Australia. Education, established and extended from the time the *May Flower* landed her Puritan freight on the bleak shores of New England, until the time when the progress of commerce brought a deluge of emigrant ignorance, has saved America under a different form of Government, and neutralized the effect of the late annual invasion of the uneducated. But in Australia no such provision exists, or is possible. And if England goes on annually inoculating the gold fields with illiterate strong arms, the feeble efforts made by Australia to redeem the errors of past educational neglect, will never be able to overtake and arrest the disease.

FUTURE PROSPECTS.

Agricultural productions, however, are not neglected. It is interesting to notice, that preserved meats are sent from New South Wales to the neighboring colonies and to England in considerable quantities. Timber for ship building is rising in estimation in the English market. Australian wines maintain their character. Wool, however, is still the great staple ; and the Circular seems to derive some consolation from the idea, that if the crop should continue deficient, prices in England will probably be maintained. "To anticipate the future prices for our staples," it says, "in a market open to so many influences as that of Great Britain, is almost impossible ; but it may be well to point out the causes which are likely to affect their value—especially to wool. We have stated that the production thereof, in New South Wales, is likely to be checked by the attraction of the gold diggings ; and still further, by the gradual abandonment of indifferent or limited runs, which formerly supported a large number of sheep, but which will not pay to work at present prices of wool and labor. Therefore, if we bear in mind that Australia has furnished half of the entire quantity of the wools imported into Great Britain, and that the English buyers have hitherto been purchasing in anticipation of a large annual increase from hence, which for the present, at any rate, will not be forthcoming, we think we need be under no apprehension of lower prices than the present."

It will be remarked, that this somewhat unfavorable report is made at the end of the first six months of the gold-fever. That kind of gold-seeking, however, which unsettles the habits of a population, and represses the other pursuits of industry, is not likely to endure very long in any country. It must give way in time to scientific mining, which is as legitimate a business as any other, and which, by the wealth it circulates, will tempt men into new avenues of industry, and recruit, to any extent that may be desirable, the supply of labor. Hitherto that supply has come in inadequate quantities, or from polluted sources ; but we have now precisely what the colony wanted—a stream of voluntary emigration, which, in process of time, when skilled labor only can be employed, will flood the diggings, and its superfluous portions find their level in the other employments afforded by the country. That this will take place without the inconvenience of a transition period, is not to be expected ; but, upon the whole, we look upon the present depression of the legitimate trade of the colony as merely a temporary evil,

arising out of circumstances that are destined to work well for its eventual prosperity.

The same process, it should be observed, has already been gone through in California. The lawless adventurers who rushed to the gold-fields from all parts of the world subsided gradually into order from mere motives of self-preservation ; and as the precious metal disappeared from the surface, multitudes were driven by necessity or policy into employments more remunerative than digging. The large mining population—the producers of gold—became the consumers of goods ; markets of all kinds were opened for their supply ; emporia of trade rose along the coast ; and a country that so recently was almost a desert, now promises to become one of the greatest marts of the commerce of the world. If this has been the case in California, the process will be much easier in Australia, where the rudiments of various businesses already exist, and where the staple articles of produce are such as can hardly be superseded to a superfluous extent.

The true calamity, however, under which the fixed colonists, the producers of the staples, suppose themselves to suffer, is the change occasioned in the price of labor by the golden prospects of the diggings. On this question there is always considered to be two antagonistical interests—that of the employers, and that of the employed ; the former contending for the minimum, and the latter for the maximum rate. But this is a fallacy. The interest of the two is identical ; and for these obvious reasons, that if wages be too high, the capitalist must cease to produce and to employ ; and if too low, the working population must sink to the position of unskilled laborers at home, and eventually bring about that very state of society from which emigration is sought as an escape. In supposing their interests to be antagonistical, the one party reasons as badly as the other ; but somehow, there always attaches to the bad reasoning of the employed a stigma of criminality, from which that of the other is free. This is unjust enough in England, but in Australia it is ridiculous. A capitalist goes out, provided with a sum so small as to be altogether useless at home as a means of permanent support, but which, in the colony, he expects, with proper management, to place him for the rest of his life in a position of almost fabulous prosperity. These cheering views, however, he confines to his own class. The measure of his happiness will not be full unless he can find cheap labor, as well as magnificent returns. For this desideratum he will make any sacrifice. He will take your paupers, your felons—your rattlesnakes ; any thing in the shape of a drudge, who will toil for mere

subsistence, and without one of the social compensations which render toil in England almost endurable.

We need never be sorry to hear of the high price of labor in countries where the employers live in ease and independence; and join heartily in the counsel to the higher class of working-men in this country given by Mr. Burton in his *Emigrant's Manual*—‘never to confound a large labor-market with good sources of employment.’ It does not appear to be one of the least of the benefits that will accrue after convalescence from the gold-fever in Australia, the higher value the employed will set upon their labor. We must not, as has been done, reason from the English standard, which has not been deliberately fixed, but forced by competition, excessive population, public burdens, and the necessities of social position. In a new country, however, where all these circumstances are absent, and whither employers and employed resort alike for the purpose of bettering their condition, traditions should be cast aside and the fabric of society erected on a new basis.

Mr. Hunt, the keeper of Mining Records at the Museum of Practical Geology, London, in a recent lecture on the precious metals, states:—

“That there are abundant historical evidences to show there is an order in the respective discoveries of gold deposits which approaches to something like a law of distribution; and the study of the facts which history affords leads to the inference that it is improbable any very extensive commercial changes will arise from the discovery of extraordinary quantities of gold in Australia, California, or elsewhere.”

It has been estimated by some that 23,000,000*l.* of gold and silver will be added to our store of precious metals this year. This appears to be one of the exaggerated statements arising out of the fever of the day. We shall not receive more than 11,000,000*l.* from the United States, California, and Australia; and if we receive 3,000,000*l.* more from all the other sources of supply, it will be as much as we may expect. Many former sources of supply are cut off, and the probability is that we shall not receive nearly so large a quantity. Let us examine briefly the rate of produce in the Australian mines:—

The Sydney district produced, from 29th May, 1851, to 31st October, 1851, 67,152 oz., of gold, value 214,886*l.*; to Nov. 10, 1851, 79,340 oz. 257,855*l.* 7*s.*; to Dec. 31, 1851, 142,975 oz., 464,668*l.* 15*s.*

In the Victoria district, to the end of December, 1851, Ballarat produced 25,108 oz., value 75,324*l.*; Mount Alexander, 30,007 oz., 96,021*l.* In December, there was shipped from Victoria, 145,116 oz.; on the 8th January, 75,188 oz.

Only about two-fifths of the gold realized is sent by the Government escort; hence there is much difficulty in arriving at the actual amount. But the imports to this country may be safely relied on as representing the maximum produce of our colonial gold fields and the auriferous districts of America. The question has arisen—May we expect the price of gold to be lessened from the influx of this metal? Annexed are some of the rates of value of a pound troy of gold at different periods:—

VALUE OF THE TROY POUND OF GOLD.

Year.	E. s. d.	Year.	E. s. d.
1344 . . .	15 0 0	1549 . . .	34 0 0
1345 . . .	13 3 4	1605 . . .	40 10 0
1347 . . .	14 0 0	1626 . . .	44 10 0
1412 . . .	16 13 14	1718 . . .	46 14 6
1464 . . .	20 16 8	1817 . . .	46 14 6
1526 . . .	27 0 0		

which is the price at which fine gold still continues—the gold of our standard being at 3*l.* 17*s.* 9*d.*

The arguments relative to the currency and the alteration in the standard of value go somewhat beyond my subject. I give you facts which may be relied on, and, with these, I must leave others better acquainted with commercial economy than myself to deal. Howbeit, let it not be forgotten that the exportation of coin from England is rapidly increasing, and the English sovereign is becoming every year more extended as a means of exchange. Formerly the Spanish dollar passed everywhere, and now the English sovereign is taken as current coin over three-fourths of the globe; and its exportation keeps pace with the importation of raw gold.

From November, 1850, to June, 1851, the Bank of England issued 9,500,000 sovereigns, being at the rate of 18,000,000 a-year; and so great is the demand for our gold coins, that Sir John Herschel informs me since November last there have been coined at the Mint 3,500,000 sovereigns and half-sovereigns, and the rate of production can scarcely keep pace with the increasing demand. This must have a material influence in maintaining that stability which is desirable in our standard of value.

It may be interesting to know that from a very correct account kept at the Bank, when the light coin was called in in 1842, that 12,000,000*l.* were received light, and that 36,000,000*l.* still circulated of full weight; 40,000,000*l.* may therefore be regarded as the quantity of gold coin in

circulation, allowing from 3 to four per cent. for the natural wear of the coin.

The following table gives, over an extended period, the coinage of Great Britain :—

Reign of	No. of Years.	Gold.	Silver.	Total Money.
James I.	22	£3,666,389	£1,807,277	£5,473,666
Charles I.	35	3,465,188	9,776,544	13,241,732
Charles II.	22	4,177,253	3,722,180	7,899,433
James II.	4	2,113,638	2,115,115	4,228,753*
William and Mary	12	2,314,889	7,093,074	9,434,963
Anne	13	2,484,531	618,212	3,102,743
George I.	14	8,492,876	233,045	8,725,921
George II.	37	11,662,216	304,360	11,966,576
George III.	61	75,753,443	6,996,765	82,750,206
George IV.	9	36,147,700	2,216,168	38,363,868
William IV.	7	14,000,000	2,800,000	?
Victoria :				
1837 to 1841	4	4,991,210	889,102	5,880,312
1842 to 1847	5	29,886,457	2,450,614	32,327,071

Total coinage of thirty-two years, ending 1847 :—£90,029,383 in gold; £13,590,000 in silver; and £248,210 in copper.

ADVICE TO INTENDENT EMIGRANTS.

Mr. John Fairfax, editor of the Sydney Morning Herald, in a lecture lately delivered in England, says :

“ To the young man of industrious and sober habits and of moral character, whose anxiety is to pursue a course of honest perseverance unappalled by difficulty and danger—I say, go. To the idle, the dissipated, the drunken—he who is reckless alike of his own peace and the sorrow he causes to others—I say, stay; for if you go to a warm climate and persevere in your present habits, you will be an outcast, you will die miserably. The two great wants of the colonies are capital and labor. For these employment on a large scale is constantly being presented. There are mines of wealth only waiting investments, and requiring men to work them. The railroad company have advertised for 200 men; and in a recent letter from the president of that company, he informs me that the contractor contemplates giving up the contract

* This included £1,596,799 of base money coined for Ireland.

in consequence of being unable to obtain men. The Bathurst Copper Mining Company, in the Herald of April 17th, advertises for 100 men. In the southern district a copper mine has been discovered ; the ore has been transmitted to England for smelting, and it has been pronounced equal in yield to the Burra Burra. This is also at a stand. The Fitzroy Iron Mining Company is in a similar position. It is situate at Mittagong, on the great southern road, within 70 miles of Sydney, and extends over a surface of about 12 acres. It is doubtless of volcanic formation, as three distinct mounds, or craters, appear, and the lava (iron ore), instead of the general pumice-stone, flows from each mound of a depth from 6 to 10 feet. The yield of this mine is remarkable. When smelted the ore produces steel of a most superior character. [The lecturer exhibited specimens of the ore in its original state, and of the metal in its manufactured state] These facts are enough to show that capital and labor are required. My advice, however, I may be permitted to tender to two or three classes. To the masters or workmen who are doing well in England, I suggest the old motto, 'Let well alone.' But if you are struggling with difficulties, which appear unconquerable, wind up your affairs and try the colonies. There we are not so thick upon the ground, and with the primest beef at 2d., and mutton at $1\frac{1}{2}$ d., you cannot, you need not, starve. Not that I would hold out the expectation of success without exertion—of fortune without the appliances of industry—or of the quiet repose of old age without thrift and care in early and middle life. The 'battle of life' must be fought lustily and bravely on both sides the world. And moral worth is as valuable and as highly prized there as here. The openings for the agricultural laborer, and the master or journeyman tradesman, are astonishing. I will only mention one instance ; it was told me by the Rev. Mr. Makenzie, a fellow passenger from Sydney to England, and I am sure is only a specimen of the increase in the price of all kinds of handicraft. He says, 'happening to break part of the harness of one of the horses I was driving, I desired my servant to carry the broken part to a saddler's shop, in order to get it mended. I accompanied the man. We travelled from shop to shop till we had visited three or four of them, before we found a man in any of them ; all the men having gone to the diggings, the shops were left under the charge of their wives or daughters. At last we reached a saddler's shop, in which I saw a little boy of 9 or 10 years of age, who said he thought he could mend the broken harness, and he did so in a few minutes ; I stood looking at him while at work, and when he had finished, I asked him what was to pay, expecting that he would say, 1s. His

reply, however, was ‘ Half-a-crown sir, if you please.’ I said, ‘ That is a very high charge, my little boy, for the few stitches it only cost you.’ ‘ But, sir,’ said this pocket edition of human nature, ‘ you must consider that all the men have gone to the diggings, and that we who stay at home to do the work of the public must charge accordingly.’ The logic was conclusive; my mouth was stopped, and my purse was opened. I paid the 2s 6d. and went away, convinced that those who stay at home and stick to their trades will largely participate in the profits of the gold digger. In January last I was paying 30s. a week, or at the rate of £78 a year, with board, to a bullock-driver, whom I could have hired last year at about £30 a year. When this man’s time with me expired, he was offered £3 a week, or at the rate of £156 a year, with board, for driving bullocks between Melbourne and Mount Alexander. I know a journeyman carpenter who was at the same time offered £4 a week, with board and constant employment, which he refused—then went to the diggings. In England there is a large class of young men, who are well educated, but are not brought up to any business pursuits. Many of this class make their way to the colonies. They bring letters of introduction to respectable and wealthy people—often to the governor—and imagine their fortunes are made. Poor fellows! Any well instructed colonist can see with half an eye that they are unfit for hard work, and therefore necessarily unfit for the colony. Often persons such as these are returned home to their parents, like unsaleable bales of merchandise; and too frequently, alas! they remain to disgrace their name, to ruin their character, and to debauch their lives. ‘ England is a nation of shop-keepers,’ said Napoleon. Be it so, rather than it should be composed of men unfit and disqualified to obey the mandate, ‘ that man should eat his bread by the sweat of his brow.’ ‘ Ships, colonies, commerce,’ is our motto, but that motto is a foul blot upon our young empire, unless it be sanctioned and upheld by enterprise, earnestness, and unconquerable zeal. The above remarks respecting educated young men without trade or profession do not apply in all cases. Ardor, intelligence, and industry, will do any thing for a man who is left to his own resources; and I have known cases where such persons have overcome almost innumerable difficulties. There is another and a large class—dividing itself into seamstresses and general female servants—to whom I would briefly say, in Australia you are wanted; and if you land virtuous and respectable, you may soon settle down the wives of honest and intelligent men.”

The following extract from Mr. Charles Dickens’s popular work.

entitled "Household Words," contains much useful and practical information, conveyed in his peculiar quaint and attractive style, under the title of

WHAT TO TAKE TO AUSTRALIA.

The great majority of the army of emigrants who are now wildly rushing to Australia, know no more about the proper preparations and the qualities and arrangements essential for comfort on a four months' voyage, than they do of working a steam-engine, or selecting the tools for an engineer's shop. In a little book just published—"Murray's Guide to the Gold Diggings"—are some useful hints on outfit and passage, which we quote with additions from a practical and experienced source.

The common practice of an intending emigrant is to discard all he has, and set out with a bran new stock of every thing. The reverse is the better plan. "Begin by mustering what you have got, and see how much will do." A single man should be in light marching order, and should endeavor to take no more clothes than he could, at a pinch, make up in a bundle and carry, groaning, on his back for a mile.

A family should take no cumbrous furniture, no pianos, no mangles, unless proceeding to settle near friends in a sea-port of the colonies, where labor has become too dear to pay for making chairs and tables. A chair that folds up flat may be useful for "mamma," so may a light metal bedstead; knives and forks, pewter plates and teapots will be useful on the voyage, and in town or bush; so will plated articles, and many little household things that weigh little, take up no great room, and sell for nothing at an auction.

Beware of ingenious costly cabin fittings; consult some experienced sea-going friend; half the articles that look tempting in a show-room are useless at sea. It is well for a family party to have just enough to enable them to enter the first suitable empty house in Melbourne or Sydney, and commence house-keeping at once, with a trunk for a seat and a tea-chest for a table. But persons going to the interior should remember that carriage is dear at all times. Three pounds were paid in December for half a horse load, for thirty miles—to the Shoalhaven diggings over a mountain track.

Every party of not less than four should take a small three-pole tent without the poles. A workman may take his tools; a digger a navvy's spade, a pick, and a heavy crowbar; but cradles and carts, and all the heavy paraphernalia, recommended in ironmongers' lists, are

better bought in the colony, to which first-rate merchants are largely shipping from the advices of their own correspondents. Half such outfits will be found useless, and half the remainder unserviceable. Clothes are nearly as cheap in the colonies as in England. They should be selected with a view to very cold as well as warm weather. The mining districts are subject to snow, sleet, and torrents of rain. A large loose coat of the best pilot cloth, made after the fashion of a soldier's great-coat down to the heels, with a large waterproof cape, loose sleeves, and capacious pockets inside, is a capital travelling companion. For Bush travelling, a full sized blanket is indispensable.

On board ship any old trowsers, if warm or light enough, according to the weather, will do. Shoes without heels on board. In the colonies good strong Wellington boots of the best materials, and not too light. Waterproof boots are a mistake; the water comes in at the top, and stays there until let out by a hole. In the Bush, and at the Diggings, woollen Jerseys, blue or red, are the wear, and blue-striped shirts, where woollen is not worn. In the chief towns of Australia, gentlemen dress exactly as they do in England, allowing for the difference of the climate, and, except boots, the prices are about the same. Both woollen and cotton stockings are needed. Hats can be bought in the colony cheap enough; two caps, one to be blown away, will be sufficient for the voyage. The following is the lowest scale of outfit required by the Government commissioners from free passengers :

FOR MALES.

Six shirts,
Six pairs stockings,
Two ditto shoes,
Two complete suits of exterior clothing,

Towels and soap.

FOR FEMALES.

Six shifts,
Two flannel petticoats,
Six pairs stockings,
Two ditto shoes,
Two gowns,

And they supply each emigrant in return for the deposit of one or two pounds, with a mattress, bolster, blankets, counterpane, canvas bag, knife, fork, and drinking mug.

In the Family Colonization Society's ships closets are provided with cisterns, pumps, and taps, in which, with marine soap, the emigrants can wash their clothes without being seen. This saves each emigrant at least thirty shillings in outfit—for two pair of stockings will, for example, do for the voyage—and should be universally adopted, as an extra five shillings a head on the passage-money would pay the ship-owner and be cheap to the emigrants. Each passenger is also required

to provide a mattress three feet by six feet for a double bed, and two feet by six feet for a single bed ; and the following articles :—

Knife and fork,	Half a bath-brick,
Table and tea-spoons,	Two sheets of sand-paper,
Metal plate,	Two coarse canvas aprons,
Hook pot,	Hammer,
Drinking mug,	Tacks,
Water-can,	Leathern straps, with buckle, to secure the beds neatly on deck, when require- ed to be aired,
Washing-basin,	
Two cabbage-nets,	
One scrubbing-brush,	
Half-a-gallon of sand,	Three pounds of marine soap,

all of which, except the sand Bath-brick, and scrubbing-brush, will be requisite for every steerage or intermediate passenger in private ships. The hammer and tacks, with a few yards of list, are most useful. It must be remembered that at sea every thing not made fast with cords or nails rolls about.

Luggage should be divided thus: First—Not Wanted on Voyage ; and so marked in large letters, packed in sound, watertight cases or barrels. Second—Wanted on Voyage ; so marked, and will be hauled on deck, for which cordage or handle is needful, about once every fortnight. Third—For Use in Cabin or Berth ; for this last purpose, a bag of leather, or two small boxes easily lifted, will be found most convenient.

As to ships and stores, we may state that good ships sail from all our ports, and bad ones. First see that the ship is classed in Lloyd's Register A 1, or at any rate not lower than Æ in red ink ; or, as it is called, the red diphthong. Ships not so classed may be fit for dry or damp cargoes but not for live souls. There is no especial advantage in a very large ship over a moderate size—say from five hundred to seven hundred tons register—if there be a height of not less than six feet between decks, seven feet being better. Ships are sometimes advertised so many tons burthen, instead of register ; this is a mere clap-trap deception. Tons burthen refer to cargoes of coal, or ore packed in bulk ; tons register are the measurement affecting live freight. The next point is ventilation. Taking a berth in a ship to Australia is like taking apartments with no exit for four months. No man would consent to live for four months in a room without a window, and without a chimney for the escape of foul air. Many fine ships go to sea with passengers, whose berths have no windows ; that is to say, in sea language, scuttles opening upon them, and no air-pipes, so that when the hatchways are shut

down, in rough weather, the passengers stand the risk of being, if not quite stifled, half poisoned.

By a very simple contrivance at a trifling expense, pipes may be, and are in some ships, arranged to bring in the pure air and carry off the foul air of two hundred souls, eating, drinking, and sleeping "down stairs," as ladies call the 'tween decks. Attention to this point is essential to the health of passengers, but especially to that of young children—and young children are great incentives to emigration. Ships carrying Patent Fuel and other foul cargoes, are not healthy for intermediate passengers—as proved by an arrival last year in Adelaide of a ship-load of sick passengers.

As to provisions, there is the greatest possible difference, and the passengers must trust much to the respectability of the ship-owners and to competition. For from twenty to twenty-five pounds, something equal to the following ought to be supplied, all of the best quality:—

Weekly Dietary Scale for each Full-Grown Person.

Biscuit,	per week, 3 lbs.	Tea,	per week, 1½ oz.
Beef,	do. ½ "	Coffee,	do. 2 "
Pork,	do. 1 "	Sugar,	do. ¾ lb.
Preserved meat, . . .	do. 1 "	Treacle,	do. ½ "
Soup bouilli,	do. 1 "	Butter,	do. ¼ "
Fish,	do. ¼ "	Cheese,	do. ½ "
Flour,	do. 3½ "	Oatmeal,	do. 2 oz.
Raisins,	do. ½ "	Lime juice,	do. 1 gill
Preserved fruit, . . .	do. ¼ "	Pickles,	do. 1 "
Suet,	do. 6 oz.	Mustard,	do. ½ oz.
Peas,	do. ²/₃ of a pint.	Salt,	do. 2 "
Rice,	do. ²/₄ lb.	Pepper,	do. ½ "
Preserved potatoes, . .	do. ½ "	Water,	do. 5 gallons. 1 qt.
Carrots,	do. ½ "	Ditto, each Infant, 1 gal. 3 qts.	

A wicker-covered stone or glass bottle will be found handy for keeping the supply of water. Thirst is better removed by washing out the mouth and lips than by drinking, when water is scarce. Fathers of families, when making bargains for their children, must take care, or they will get only half or quarter-rations for grown boys and girls, and the same space for the same proportion of price. In the tropics, the children are constantly crying for drink.

A written engagement with the broker is advisable, specifying the name of ship; date at which it is to sail from London and Plymouth, or other port; the exact berth or cabin; and the scale of provisions,

and the quantity of luggage allowed, exclusive of the space in the cabin or berth, which ought not to be charged for. All this, if settled with a respectable broker, will save many disputes. Parties have been put to much expense by being compelled to stay, day after day, at the port of embarkation at a hotel or lodging, after the date fixed by advertisement for the sailing of the ship. The amount of luggage allowed each passenger is calculated by superficial feet, a mysterious mode of measurement to the uninitiated. Some brokers include in the allowance of luggage that carried in the cabin :—a most unjustifiable charge, under which a gentleman lately found a man in his cabin measuring not only his cot and violin-case, but his packets of lamp candles.

It is as well to visit the ship before any of your luggage is sent on board, and see that all is as agreed upon ; persons going on board at the last moment have found their chosen berths in the possession of a stranger, and themselves condemned to a sort of Black-hole, without air or light. Second class and steerage passengers should see that they have some room for exercise after the cabin passengers and cargo have been attended to. In some ships no space is left. An airy cabin for a hospital is an essential point.

Among extra stores for comfort on the voyage, it is well to name effervescing powders, a few pickles, a bottle of really good lime juice (that usually supplied to emigrants is horrible stuff), a few boxes of sardines, or anchovies or potted herrings, and a little tea and sugar of the best quality, for use when the cook or steward is not ready to serve any out.

On the day the ship sails there is often so much confusion, and the cook is frequently so drunk, that there are no meals to be had : it is therefore well to provide a sort of pic-nic provision in a basket for the first day's dinner and supper.

With these precautions, good temper, good nature, and a quiet tongue, the voyage to Australia may be made pleasantly and economically.

CHAPTER XI.

LATEST INTELLIGENCE.

THE LARGEST LUMP OF GOLD.

THE largest yet found in Australia is that called (on account of its size) "the King of Nuggets," from Forest Creek, Mount Alexander, in the colony of Victoria, weighing 27 lbs. 6 oz. 15 dwts. This lump, unlike the majority, contains no quartz, but is a massive lump of pure gold of a very fine color. It is eleven inches in length and five in breadth, at the widest part. It was shipped, together with a very large consignment of gold, on board the barque "Posthumus," by Mr. Joseph Herring, of Port Phillip, to Messrs. Herring of London, England.

GOVERNMENT RETURNS.

It appears by a blue-book just printed, by order of the House of Commons, that the total quantity of gold transmitted by the Government escort from the various workings in Australia, from the 30th Sept. to 31st Dec., 1851, amounted to 124,135 ounces, or equivalent to £374,505. It is calculated that not more than two-fifths of the gold realized at the workings is forwarded by escort. The amount paid to the Government for licenses to work, at the rate of £1 10s. per month, up to the 31st Dec., 1851, was £25,481 19s. The sum paid for escort fees to the crown, at £1 per cent., was £3,634 17s.

WAGES.

The following quotations of the labor market in Australia may be interesting. Accounts are from Melbourne, dated 22d April, and state that, although the supply of labor during the month had been somewhat better than for a long time previous, yet still it did not equal the demand. The following rates of wages were readily paid, with rations:—

Married couples without families, £50 to £60; ditto with family, £45 to £50; shepherds, £33 to 35; hutkeepers, £28 to £30; general useful help, £36 to £40; bullock drivers, £40 to £50; gardeners, £33 to £36; cooks, £40 to £50, bush carpenters, £35 to £40; house carpenters, £50 to £60; grooms, £40 to £50; stockkeepers, £30 to £35; milkmen, £28 to £30; ploughmen, £50; horseshoers and wheelwrights, £1 per diem.

FEMALE HELP:—Housemaids, £16 to £20; cooks, £20 to £22; laundresses, £18 to £22; nursemaids, £12 to £15; nursery governesses or needlewomen, £15 to £18.

GOLD PRODUCTIONS.

The latest intelligence from Sydney and Melbourne is to the 17th of April.

The last escort had brought in from Mount Alexander, 12,873 ounces; and from Ballarat, 925 ounces of gold. The *Sydney Morning Herald* correspondent at the former place, says:—

“To give any thing like an accurate guess at the daily amount of gold raised would be absolutely impossible, for it is so variable that the return of one day is no guide whatever to that of another. Besides this, fully two-thirds of the diggers are unable to wash as they would do if there were plenty of water in the creek. Many of these are now employed at dry digging, or nuggeting as it is called here, in holes already sunk, saving perhaps a little of the choicest earth, which they bring home with them to wash in a tin dish, and setting aside the likely-looking stuff for the time when the cradle can be brought into operation. These are just making enough to clear themselves, with perhaps a trifle to spare, looking forward to the rainy season to pay them. Others again are prospecting, or sinking holes in the various gullies which give a promise of gold; many of them have been eminently successful, and many localities have been discovered which will turn out a very large amount of gold when water shall be more plentiful. Thus all are in good heart, knowing well that with the first fall of rain a rich harvest awaits them. Even as it is now, every man may obtain a good day's wages if he choose to stick hard to work, with of course the chance of falling upon a pocket if he should be in luck. Thus it is that the amount of gold procured still continues so large.”

The Bathurst paper mentions that, although fewer in number the diggers were certainly more prosperous than at any previous time, and

a larger amount of licenses had been obtained than in any previous month.

"In every case where common industry was exercised, good wages were obtained by the Tuena diggers, but large earnings were by no means uncommon. Many parties were making two to four ounces of gold per day. Mr. Lee's party had been making sometimes three, and frequently four ounces per day on Sheep Station Point, and others were equally successful. Since Tuena had been made a police station, matters had proceeded much more peaceably than was formerly the case. Although not suppressed, sly grog-selling was conducted in a more stealthy manner, and public decency a little more respected. Mr. Fox, chief constable of Carcoar, accompanied by one or two of his subordinates, visited the place a short time ago, and squared accounts with a few of the illicit tapsters."

The following extracts will show the state of things in other districts:—

"THE WENTWORTH GOLD FIELDS.—A short time ago, Mr. Stutchbury, the Government geologist, paid a visit to the 'Wentworth Gold Fields,' and in consequence of the observations made by him, with reference to the probable richness of that portion of Mr. Wentworth's estate which adjoins the land belonging to the Wentworth Gold Company, Mr. Daniel was induced to prospect it, and the result is highly encouraging. There can be no doubt of the existence of other rich digging grounds, perhaps equally rich with those already proved and appropriated. The specimens obtained by working with a cradle are precisely similar in character to the gold produced by the Company's ground. The small grains show by their flattened state and rounded outline, that they are found in their original place of deposit. The promulgation of the above intelligence has created a little excitement amongst the residents of Frederick's Valley, numbers of whom have made application to Mr. Daniel for permission to work the ground upon the halves; but, until instructions upon the subject have been received from Mr. Wentworth, no licenses will be issued. As a proof that gold is not necessarily the root of evil, I may mention that since its discovery in this neighborhood, a decided improvement is observable in the circumstances of the small settling class. They evidently possess in greater abundance than formerly, both the necessaries and comforts of life, and it is with pleasure I state it, that their moral condition also is improved. A strong disposition is beginning to manifest itself to expend their savings in the purchase of small farms as homesteads, several 40 and 50

acre patches having latterly been bought by lucky gold diggers. This is a sign of the times which cannot be misinterpreted."

"LONG CREEK.—A respectable individual, who has spent a considerable portion of his time since the gold discovery about the Louisa and Meroo Creeks, and their tributaries, thus speaks of the diggings at Long Creek, one of the 'feeders' of the Meroo:—'There are 500 to 600 people digging hereabouts, at the very least, within a comparatively small compass, all doing well. The least unfortunate amongst us, if at all industrious, can make his £1 per day, and many are earning a great deal more. I do not mean to assert for a single moment, that there are not unlucky men amongst us, nor that claims are not sometimes opened which prove unremunerative. Plenty of men arrive here, try their luck for a day or two, and if unsuccessful, fly off elsewhere. We have also a few schemers and loungers amongst us, who have a constitutional antipathy to hard work, and live I can't say how. Sly grog-selling is an easy way of making money, and one very much preferred to digging, by the scheming and reprobate class. But to the industrious, persevering, honest workman, who prefers trusting to his own strong arms rather than to trickery or scheming for a maintenance, there is a certain prospect of success. Near where I am working there are some splendid claims. My own party have been making 6, 7, and 8 ounces of gold a day for some time—sometimes certainly less. I have just sold my share of gold, obtained since we last divided, for £93. We have to cart our stuff a short distance to water. Out of one load we have just procured 3 ounces, and this is by no means unusual with us. A claim is reckoned a very poor one here which does not turn out 2 ounces to each party. Some men who have no other means of conveying the earth to the creek, carry it in bags on their backs; but this is a very toilsome and unprofitable process. Working singly in this manner, they earn from $\frac{1}{4}$ to $\frac{1}{2}$ an ounce daily. As ours are all bank claims, we possess a great advantage over the Turon diggers, the floods doing us good instead of harm. There are no bed-claims here; they won't pay for working. A few of the diggers tried, but as none of them did any good, the attempt has not been renewed. In some cases a great depth of earth, what is usually termed 'top-stuff,' has to be thrown off before you reach the gold. In our present claim, we did not get a pennyworth until we had sunk fourteen feet, and came upon the deposit; after which we frequently procured 5s. worth of gold in a single tin-dish of earth. Not far distant from this is a place which goes by the name of Spicer's Creek, upon which there are a good many now at work and doing well. I was the first

discoverer of gold in that quarter, and was in solitary possession of the secret for five weeks, during which, myself digging, and my wife rocking the cradle, we made £263. Our secrecy was finally invaded, the length of our stay having created a suspicion that we must be doing a first-rate stroke, and in a couple of days some two hundred diggers were down upon us, tearing up the earth in all directions. Grog-shops are not only numerous but numberless at Long Creek, and a rare business some of them are doing. They carry on their traffic unmolested, and are seldom troubled by that patriotic and disinterested class of officials yeclpt 'blue-bottles.' I will conclude by expressing my opinion that the diggings hereabouts will continue profitable for a long time. There are lots of country of the same character as our present digging-grounds yet untouched."

That the fullest and most satisfactory proofs may be afforded to the public of the state of the colonies, we quote the latest official circulars.

MR. GEORGE A. FLOYD'S SYDNEY GOLD CIRCULARS.

"The water of the Turon has not yet gone down sufficiently to admit of the bed-claims being worked. Some of the diggers are employed in washing the river-drift, which is now nearly exhausted. Good dry diggings have been discovered opposite to the end of a range call Ration Hill, where a great number of holes are being sunk, and some of the parties look forward to considerable success. The richest of these claims has been known to yield 10 ounces per day. Sheep Station Point is nearly deserted, and tents are daily disappearing from the Upper Wallaby, the diggers leaving by scores for Wirt Hole Creek, Tamboora, and Meroo, where fresh claims are being opened with every prospect of remu era ion.

"About thirty-five miles from Golbourne a mine has been discovered at Maroora ong, on a farm belonging to Mr. D. H. Thorne. The gold was found at the depth of twelve et, and continued to increase as they went lower down. About eight men are engaged, and making from 3 to 4 ounces per week; and it is stated that in one panful of earth, they found a turquoise and a ruby.

"Near the head of Tamboora, a number of deep shafts have been sunk with satisfactory results; the water is, however, scarce, and dams for its reservation are being constructed at great expense, to prevent the necessity which now exists of carting the soil to the various water-holes for the purpose of washing. A man from this district yesterday

received £189 on the sale of his gold, as his share of three weeks' labor.

"A rich gold-field appears to exist on General Stewart's estate, about four miles from Bathurst, which will no doubt be worked to advantage as soon as labor becomes more plentiful. A man named Lawrence Byrnes, with his mate, worked ten hours, and got 14 dwts. of gold, in value about two guineas; but because they could not find it in ounces, they left the spot, stating themselves not satisfied with such a poor return for their labor. This fact expresses, more significantly than a volume of words, the value of our mines. About 500 people are working on Long Creek, a tributary of the Meroo; they are all comparatively in a small compass, and the principal portion of them are doing well; the least fortunate, if at all industrious, can earn 20s. per day, and the majority much more. One party has been making from 6 ounces to 8 ounces per day, although the soil has to be carted a considerable distance to be washed. It is not at all unusual to find 3 ounces of gold in one cart-load of soil, and a claim here is reckoned very poor if it will not yield two ounces per day to a party. At Tuena, the diggers are not so numerous as they were, but their success appears greater; good wages are obtained with common industry, and large earnings (say from 2 to 4 ounces per day) are by no means rare.

"The Braidwood mines still continue to yield their glittering treasure, without any apparent diminution. The old digging localities are not yet exhausted; and new discoveries are occasionally made. 380 licenses have been taken out this month on Major's Creek. His Excellency the Governor, during his visit to this district, purchased a quartz nugget, about 8 ounces, and another sample at Inverlochy, for the purpose of adding them to his cabinet specimens of Australian gold.

"Parties are allowed to work here for one month, without paying any license fee to the proprietor.

"We have been favored by a highly respectable house in town with a sight of half an ounce of gold, from a new mine which is just opened out at Blakeness Creek, about 14 miles from Yass. It is evidently very pure, and of a different description to either the Turon, Ophir, or Braidwood. The character of the ground is quartz, granite, slate, and sand, with every appearance of having at some time been in a state of fusion. Experienced men who have visited this mine think very favorably of it. A number of persons with cradles are at work, and we hope next week to be able to report more fully on the subject.

"Up to the 6th of this month, 160 licenses had been taken out for

the Peel Diggings. The largest quantity obtained by one party has been 4 ounces per day. Renwick's party of three are still making 1½ ounce per day. The labor is not very heavy, as the precious metal is found principally in the river drift, and in holes and crevices of the rock, from which it is extracted with trowels and such like tools.

"The escort brought in this week from Braidwood, 534 oz.; Bell's Creek, 135 oz.; Araluen, 303 oz.; Goulburn, 81 oz.; Sofala, 1,129 oz.; Airsford, 918 oz.; Tambaroora, 458 oz.; Bathurst, 291 oz.; Ophir, 110 oz. And the mails from Bathurst, 127 oz.; Sofala, 484 oz.; Mudgee, 37 oz.; Goulburn, 92 oz.; Braidford, 241 oz.; Yass, 18 oz.; and Tamworth, 40 oz. In all, by escort and mails, 5,065 oz., in value about £16,461.

"Letters are in town from the Rev. Mr. Clarke, who reports favorably of a large tract of country over which he has travelled.

"The price has varied through the week from 63s. to 64s., at which it was very firm yesterday; but large quantities are expected from Melbourne during next week, which may reduce the price again.

"At Victoria the quantity coming in is still large; the escort brought down last week 13,808 ounces.

"It is with sincere pleasure we announce that five of the gang who robbed the *Nelson* have been captured, and there is every reason to hope that they will all be taken; we trust that no expense will be spared, and no stone left unturned, to bring these scoundrels to justice—it is the most barefaced robbery that has been committed since we lost our convict character, and as it is a matter that affects, directly or indirectly, every individual in the community, we hope our friends in Melbourne will see the propriety of not resting satisfied until every man concerned in this piracy has been secured. It was well remarked by a writer on the subject, that 'the success which attended them would prove eminently suggestive to other vagabonds, who would rather live by plunder, than work for an honest livelihood.' We would add, with still greater force, if possible, LET THE CONSEQUENCES BE ALSO AS SUGGESTIVE. One of the Insurance Companies at Melbourne has resolved not to take the risk of gold lying on board the vessels while in the port of Victoria.

"The overland escort from Mount Alexander to Adelaide had reached there safely, under the command of Mr. Commissioner Tolmer, in fourteen days, conveying upwards of 5 cwt. of gold;—about £50,000 worth of gold had been deposited in the assay office under the provisions of the Bullion Act, and the Bank of Australasia were still refusing to take ingots and issue their notes upon them. An attempt has

been made by the Collector of Customs to claim an import duty of 5 per cent. on the gold brought down by the *Queen of Sheba*, but it was supposed the Governor would not sanction it.

“The export since our last has been—

	oz.
“ April 13— <i>Ann</i> , for India	500
“ <i>Tamar</i> , for London	6,339
“ 15— <i>S. Vincent</i> , for London	1,452
	<hr/>
	8,291
Which, at 65s. per ounce, gives	£26,945 15 0
Add previous export	1,208,380 15 7
Total exported to this date	<hr/> £1,235,326 10 7

“ Exchange on London—drafts against gold, 8 per cent discount.

“ Freight, $\frac{1}{2}$ per cent.

“ GEORGE A. LLOYD.

“ 474, George Street, April 17th.”

Mr. JOHN GODFREY COHEN'S.

“ Since my last circular the banks have made some extensive purchases, mostly, it is understood, through private agents, the rates given being 64s. to 64s. 6d. My sales to-day amounted to £2,873 13s. 6d., the prices obtained averaging 64s. The temper of the market seems to have been slightly affected by the late advices from England, assigning a trifling inferiority to Turon gold. This circumstance has naturally created some distrust among buyers; and there is an evident reluctance on the part of old speculators to follow advanced rates. Notwithstanding this prices have gone up, with a prospect of a further advance. At Melbourne also a great improvement in price has been sustained; the *Waratah*, which vessel arrived there on the 8th, having conveyed to that market several extensive purchasers. The last escorts from Mount Alexander and Ballarat, brought 13,808 ounces. My letters, by this morning's mail, report the apprehension of several persons suspected of having been concerned in the *Nelson* piracy.

“ By advices from Adelaide, dated March 30, I learn that the deposits at the new Assay Office up to the 27th of that month, amounted to £76,742 4s., and that the ingot system appeared to be working satisfactorily. The latest accounts from Van Diemen's Land contain infor-

mation of a new discovery at Pittwater, which really bids fair to give important results; several small nuggets, the size of shot and peas, having been found in the first washings.

"A rumor was current in town yesterday, that A MONSTER BLOCK OF GOLD, 4 cwt., had been excavated from the quartz ridge of the Lousia. From inquiries which I have made, I learn that the company which is there bringing machinery to operate on the quartz, have broken out some large lumps, supposed to be fully the weight given, which are very richly impregnated with the precious metal.

"The quantity of gold from our own diggings by public conveyance during the week was about 5,000 ounces. At the Turon some dry rich diggings are now in full work, and new discoveries have been made. Several beautiful nuggets of pure gold have reached Sydney, which were obtained at Circus Point, below Curtis's lower store, from ground hitherto neglected.

"JOHN GODFREY COHEN, Auctioneer.

"490 George-street, April 17."

SYDNEY PRODUCE CIRCULAR.

"The quantity of wool offered at last sale was very small, and realized tolerably good prices, quite equal to last week's quotations.

"Tallow, of which there was a considerable quantity, met with a ready sale, at, for beef, £25 12s. 6d.; mutton, £27. A large number of hides fetched at from 7s. 6d. to 8s. each. Sheepskins about as last quoted.

"Freights to London—Wool { greasy, $\frac{1}{2}$ d. and 5 per cent.
washed, $\frac{5}{8}$ d. and 5 per cent.

Hides, 20s. to 25s. per ton.

Tallow, 35s. per ton, and 5s. per cent.

Oil, £3 per ton.

Gold, $\frac{1}{2}$ per cent.

Exchange on London.—Bank Drafts, 6 $\frac{1}{2}$ per cent. discount.

Private Bills, (with produce hypothecated,) 8 per cent. discount.

PRICES CURRENT.

WOOL.		s.	d.		s.	a.
Superior clips	.	1	3	to	1	4
Fair to good	.	1	$1\frac{1}{2}$		1	$2\frac{1}{2}$
Low to middling	.	1	0		1	1

	s. d.	s. d.
Grease	0 5½	to 0 8
Locks, pieces, broken wool, &c. .	0 6	1 0
Handwashed and scoured . .	0 11	1 6

TALLOW.

Beef	£26 0 0	to £0 0 0
Mutton	27 0 0	0 0 0
Station Tallow	22 0 0	24 0 0
Hides, each	0 5 0	0 7 6
Sheepskins, per pound .	0 0 3½	0 0 5½

GOLD.

Dust and nuggets, per ounce, £3 4s.

“ THOMAS S. MORT.

“ Circular Quay, Sydney, April 17, 1852.”

MELBOURNE GOLD CIRCULAR.

“ The market in the early part of the week was firm, and sales were made at higher rates than quoted in my last. There was less animation, however, in the middle of the week, and towards the latter end the price gave way, and it was purchased on Friday at from £2 19s. 3d. to £2 19s. 6d.; on Saturday, however, the market was firmer, and the holders seemed unwilling to realize at those rates. The large amount of capital which has been thrown into the metropolitan city has given an immense impetus to trade, which was never so brisk before; and this prosperity will not be confined to the colony. The increase in the supply of the precious metal, and the consequent advance in the money price of real property, and every article of consumption in Britain, will not only give increased facilities to trade, but will improve the condition of the vast majority of the people; the exceptions being capitalists, whose money is out at interest, and holders, and persons upon fixed incomes. It is pretty generally understood that the distress in Great Britain during the period between 1818 and 1830 was chiefly owing to the great falling off in bullion consequent upon the War of Independence in the South American provinces; and in the last year of which we can find any record of the quantity imported into Britain, we find it had fallen to £195,571. It is thus stated by Porter for 1836:—Mexico,

£70,210 ; Bolivia, £17,051 ; Chili, £78,515 ; Peru, £29,795. Total —£195,571. The gold shipped from Victoria already amounts to £1,359,834.

"The gold from the diggings is still good, the Bendigo appearing to be the best part at the present moment. I have, however, had several lots lately from the Picaninny Creek, from Ballarat, and from the M'Ion Creek, which it is said will be a very prolific place for diggers. I purchased a parcel of gold this week which came from Mount Macedon ; it was evidently from the surface, and very dark in color. I had one parcel from the Pyrenees of similar quality, and have little doubt both places will yield.

"The money market continues still in a very unsatisfactory condition ; the banks are now generally declining to advance upon gold, and this circumstance has visibly affected the market. As an instance of the state of the exchange between this place and England, I may mention that I had a bill of the great Rothschild's in my hands this week, and I could not get a better offer for it than 25 per cent. discount.

"The escort brought this week, from Mount Alexander, 12,055 ounces ; from Ballarat, 129 ounces.

"THOMAS M'COMBIE, *Gold Broker.*

"Collins-street, April 3d."

CHAPTER XII.

THE NEW GOLD REGULATIONS.

(From the Sydney Government Gazette, April 2.)

Colonial Secretary's Office,
Sydney, March 29, 1852. }

His Excellency the Governor General has been pleased, with the advice of the Executive Council, to direct that the following consolidated and amended code of regulations for the management of the gold fields be published for general information :—

I. ALLUVIAL GOLD.

1. *Crown Land Licenses.*

1. No person will be permitted to dig, search for, or remove gold on or from any land, public or private, without first taking out a license in the form annexed. All gold procured without due authority will be seized, as being the property of the crown, in whose possession soever it may be.
2. The license fee for Crown Lands has been fixed at one pound ten shillings per month, to be paid in advance. These licenses only extend to the extraction of alluvial gold, matrix gold being the subject of other regulations, which will be found in a subsequent part of the present code.
3. Licenses can be obtained on the gold field from the commissioner, or assistant commissioner, appointed by his Excellency the Governor General to carry the regulations into effect, and who is authorized to receive the fee payable thereon.
4. No person will be eligible to obtain a license, or the renewal of a license, unless he shall produce a certificate of discharge from his last service, or show to the satisfaction of the commissioner, or assistant commissioner, that he is not a person improperly absent from hired service.
5. Persons desirous of establishing claims to new and unoccupied

ground by working in the ordinary method for alluvial gold, may have their claims marked out on the following scale to each person, namely:

1. Fifteen feet frontage to either side of a river or main creek.
2. Twenty feet of the bed of a tributary to a river or main creek, extending across its whole breadth.
3. Sixty feet of the bed of a ravine or water-course.
4. Twenty feet square of table land or river flats.
6. These claims will be secured to the parties for such time only as they may continue to hold licenses for the same; unless in case of flood, or other such unavoidable accident as shall, in the opinion of the commissioner or assistant commissioner, render a suspension of the work inevitable.
7. The above licenses may be cancelled and the claims forfeited, in consequence of the conviction of the holders, in any court of competent jurisdiction, of the illicit sale of spirits, or of any disorderly or riotous conduct endangering the public morals or peace.
8. Persons found working alluvial gold on any land, public or private, without having previously paid the license fee to the proper officer, shall pay double the amount for such license; and, in default, be proceeded against in the usual manner.
9. If any dispute shall arise in respect of any claim, reference should be forthwith made by the complainant to the commissioner or assistant commissioner of the district, who will lose no time in hearing and summarily determining the case on the spot, according to the evidence adduced on either side, giving due notice, of course, to the party complained of. If necessary, he will take the proper measures for placing and maintaining the successful party in possession of the claim.

2. *Private Land Licenses.*

With respect to lands alienated by the crown in fee simple, the commissioner will not be authorized to issue licenses under these regulations to any persons but the proprietors, or persons authorized by them in writing to apply for the same. The license fee for such lands will be one-half only of that payable for Crown Lands. Persons holding the same and working on Crown Lands, without licenses applicable thereto, will be liable to the payment of a double fee; and all gold obtained without due authority will, as in the case of Crown Lands, be seized, as being the property of the Crown.

3. Water-Holes.

1. Persons desirous of draining ponds or water-holes, for the purpose of obtaining alluvial gold, may make application in writing to the commissioner or assistant commissioner of the district, describing accurately the locality. Such applications shall be decided by priority, and shall be immediately recorded by such officer in a book to be kept by him for that purpose, which shall be open at all reasonable times to the inspection of applicants. If there should be no valid objection to the application from interference with alluvial digging, or other sufficient cause, the right to drain the water-hole will be conceded to the applicant on payment of such number of licenses as shall be proportioned to the area of the water-hole, calculated at the rate of twenty-five feet square for every license. A claim for emptying a water-hole will be deemed to extend twelve feet from the bank defining the boundary of such water-hole, together with sufficient space for the erection of machinery and for other necessary purposes, to be determined by the commissioner or assistant commissioner of the district.

2. The commissioner or assistant commissioner is empowered to make such temporary regulations as may be necessary to prevent inconvenience to other licensed persons from the carrying on of operations of the above nature.

4. Reservoirs for Washing Gold.

1. Persons desirous of constructing reservoirs or dams in the gold fields, for the purpose of washing gold, should make application to the local assistant commissioner, who will, if the same should appear to him unquestionable, grant the requisite permission.

2. The reservoirs or dams will be reserved for the exclusive use of the applicants, in all cases in which such reservations will not in the opinion of the assistant commissioner be detrimental to the public interest.

5. Employers of Licensed Laborers.

1. The owners of all claims who may employ men on hire, to assist them in working alluvial gold, and who may take out licenses for them, will be entitled, on application to the commissioner or assistant commis-

sioner of the district, to have the licenses of such men transferred to other laborers, in the event of their quitting their service, or ceasing to work for them. The licenses must in every such case be produced to the commissioner or assistant commissioner, who will endorse thereon without any additional fee the name of the transferee.

II. MATRIX GOLD.

1. *Crown Lands.*

1. Persons desirous of working auriferous quartz veins may make application in writing to the commissioner or assistant commissioner of the gold district, accurately describing the locality. Such application shall be immediately recorded by such officer in a book to be kept for that purpose, which shall be open at all reasonable times to the inspection of applicants. In case no previous application shall have been made in the manner above described, and should there be no valid objection to the proposal, from interference with alluvial digging, or any other sufficient cause, the commissioner, on the same being approved of by the Government, shall notify to the Government his acceptance of the same. The applicant shall then enter into a bond, binding himself and his partners, should the Government be satisfied with the sufficiency of the parties, jointly and severally, in the sum of £1,000 to pay a royalty of 10 per cent. on all gold obtained to an officer to be appointed for that purpose by the Government. If the Government be not satisfied with the sufficiency of the applicant, the two or more solvent and responsible parties must be named. He shall further be bound to permit such officer to reside on the land in the neighborhood of the works, at such spot as may be assigned by the commissioner, and also to give such officer access at all reasonable times to the buildings or premises, and to all books and accounts connected with the production of gold; also to give all necessary facilities for the collection of the royalty, daily or weekly, as may be found most desirable.

2. All buildings, machinery, or other improvements erected or made on the land shall be considered as additional security for the due performance of the conditions of the bond.

3. The claim shall consist of half a mile of, and in the course of, the vein, with a quarter of a mile reserved on each side of such vein for building and other purposes necessary for carrying on operations. The

right of cutting or using timber for building or for firewood, from adjoining crown lands, as well as access to neighboring water, shall also be conceded ; and, where the public convenience shall not suffer thereby, the commissioner or assistant commissioner of the district will be empower to grant the exclusive right to necessary water, whether on the half-mile square inclosing the vein or in the immediate neighborhood.

4. The beds of rivers or main creeks, intersected by veins, included in such claims, are not excluded from license to the public generally, except for a distance of fifty yards on each side of such veins. But with this exception no licenses shall be given to the public to dig for alluvial gold on such claims. The holders of the claims, however, who may desire to work alluvial gold, must take out licenses on payment of the usual fee of thirty shillings monthly, for such number of persons as they may employ for this purpose.

5. A claim, such as the above, shall be forfeited by the failure of the applicant to enter within a reasonable period, to be notified to him by the commissioner in writing, into the required bond : by his neglecting to pay the prescribed royalty, at the time and in the manner required by the bond ; by his not employing at least twenty persons, or machinery equivalent, calculated at the rate of one horse-power to seven men, on such claim within six months of the acceptance of his application for the same, unless such time shall be specially extended by the Government—by his ceasing to employ that number of persons or such machinery on the works for one month thereafter—by employing unlicensed persons to work alluvial gold on the claim—by obstructing the officer in the proper performance of his duty—or in any other way violating the terms of the bond. Such vein shall then be open to selection by other parties.

6. The duration of the claim shall be three years, which, however, shall be extended for such further period as upon receipt of instructions from her majesty's Government may be determined upon, having due regard to the interests of the parties concerned. At the expiration of the term of their holding, or on the sooner determination of the tenure by the consent of the government, the parties shall have liberty to remove all buildings, machinery, or other improvements erected or made by them, and a reasonable time shall be given for that purpose ; provided always that the conditions of the bond shall have been duly fulfilled.

7. No portion of land previously occupied under claims for alluvial gold will be open to selection for matrix gold, while it continues to be worked for the former.

2. Private Lands.

Persons desirous of working auriferous quartz veins on private lands, shall be subject to the terms of the above regulations with the exception that the royalty payable on the gross product of gold shall be 5 per cent., and that they shall not be compelled to employ any specified number of persons, nor be liable to any penalty on their ceasing to work.

III. TRADERS' LICENSES.

Persons occupying portions of the gold field, by erecting temporary buildings, tents, &c., and carrying on any business, or following any trade or calling, shall pay a fee of thirty shillings monthly, for the use of the land so occupied by them; and they are required to pay the same on demand, and in advance, to the officer appointed to receive payment of license fees. Such license may be cancelled at any time, should the land be required for any public purpose, or in consequence of the conviction of the licensed occupant in any court of competent jurisdiction of the illicit sale of spirits, or of any disorderly or riotous conduct endangering the public morals or peace; and in no case will any claim to compensation for improvements be recognized.

IV. LAND HELD UNDER PASTORAL LEASES.

Inconvenience being felt from the occupancy under lease, in terms of the regulations, of the 29th March, 1848, of such portions of the crown lands as are now being worked under licenses for digging gold, it has become necessary to terminate the leases in all such cases as shall be reported by the commissioner or assistant commissioner, to be desirable for securing to the licensed miners the undisturbed prosecution of their employment. On receiving such reports, the necessary notice will be given to the lessees, by the proper officer, of the termination of their leases, after the expiration of one month; and the sum paid by such lessees for the lands resumed, or the proportion payable for the remainder of the term, will be refunded, as provided for in the regulations referred to. In acting on this regulation, no greater interference with the interests of the leases will be sanctioned, than may be absolutely necessary to insure the object contemplated.

Form referred to—

GOLD LICENSE.

No. .

185 .

The bearer , having paid to me the sum of one pound, ten shillings, on account of the territorial revenue, I hereby license him to dig, search for, and remove alluvial gold, on and from any such crown land as I shall assign to him for that purpose, during the month of , 185 , subject to the government regulations in force for the time being for the management of the gold field.

This license does not extend to matrix gold, and must be produced whenever demanded by me, or any other person acting under the authority of the government.

(Signed)

A. B., *Commissioner.*

Since the foregoing was printed, fresh accounts have been received from the various diggings of the colonies so late as the middle of May.

At Melbourne, it appears the miners have recommenced their labors with great energy. A large nugget—the largest yet—had been found opposite Golden Gulley, which is said to be worth £2,000. Many fatal accidents had occurred, owing to men falling into deserted holes, or the earth falling in upon them when undermining, and the want of due care. At Ballarat the miners were comparatively inactive. At Forest Creek there had been a few showers, but not enough to effect the water holes. The miners were looking with no little trepidation for the approach of winter. To the greater number of diggers it would be the first winter in the bush. The commissioners had relaxed their vigilance in exacting the license fee; so that there was no ground for provoking opposition, or the resistance threatened a few months ago. The price of gold at Melbourne was 58s. per ounce, and not likely to advance until the advent of English capital, money being more scarce than in Adelaide. The diggers at Coghill's Creek, distant fifteen miles from Ballaret, were doing well. At Cape Otway, also, the miners were reaping a good reward for their labor. The place is situated at the foot of the ranges, about eighteen miles from the coast, and about six from the head of the Barwon. Letters from Mount Alexander notice that more than a hundred men were employed in making roads. Neither have the authorities been backward in providing for the security of life and property.

At the Bendigo diggings the miners were progressing favorably; but against this success must be considered the fact, that supplies there are generally 25 per cent. higher than at Forest Creek—while the price of gold is from 3s. to 4s. an ounce lower, or say about 125 per cent. higher than Melbourne prices, although not many miles distant.

SOUTH AUSTRALIA.

Via Singapore—Adelaide journals have been received to the middle of May. Several recent instances have occurred of footpads attacking persons after dark, for the purpose of plunder. In example of the footpads at Melbourne, the ruffians attack every one that they meet in the street after dark, depending upon the law of chances. Many score men without a farthing in their pockets have been ill treated, but they occasionally secure a good prize. Such a state of things has induced the authorities to augment the police force. Considerable difficulty is experienced from the paucity of silver coin; and to meet the exigencies of the case, it was suggested, that one of the banking companies should issue five and ten shilling notes, which would be readily adopted by the community; and, it was believed, that the destruction of notes which invariably results from a small-note circulation, would justify the expense and trouble incurred by issuing notes of small value. The city and district of Adelaide—indeed the entire province of South Australia, which, a few months' since, were cheerless and comparatively deserted, have once more a busy and happy population, the result of the opening of the overland route to the diggings at Mount Alexander, and the expected issuing of gold bars from the Adelaide mint. The arrivals of gold by the escort having been made with great regularity, the aggregate in two months having exceeded £350,000, and there being a fair promise of about a ton of gold reaching monthly. Emigration to Melbourne still goes forward with much activity, but most of the men's families are left behind, and remittances sent to them by the government escort. The late bullion act has effectually relieved the province from the certain impending ruin which threatened it. And this reactionary effect will continue so long as the Adelaide mint offers £3 11s. per ounce for gold, assay value, or £3 8s. cash, while the ruling rate at Melbourne, by latest advices, was only £2 19s. per ounce.

VICTORIA.

Port Phillip journals to the first week in May, notice that the Lieutenant Governor was making arrangements to stem the torrent of crime pouring upon the province; he has authorized the erection of six out-stations at Mount Alexander, each to accommodate an assistant commissioner, with a staff of officers, three horse and sixteen foot police, two police magistrates, stations and barracks for pensioners. The salaries of assistant commissioners have been increased from £300 to £400 per annum, and their establishments in proportion. The iron auxiliary screw steamer Considine, from San Francisco, is now running regularly between Melbourne and Sydney. The ordinary revenue at Melbourne for the quarter ending March 31st, was £75,272, and the territorial revenue, £156,827, the total being an increase over the same quarter in the previous year, of £182,981. The government were endeavoring to purchase a vessel of nearly 1,000 tons, to be used as a hulk for prisoners. A guard-ship has been placed in Hobson's Bay. Her Majesty's brig Fantome was daily expected to arrive, and would give protection to the shipping, and prevent a recurrence of so daring a robbery as that effected on board the Nelson. The Melbourne newspapers contain innumerable instances of violence, murders, affrays, night and day robberies, sufficiently attesting the character of hundreds of wretches who have resorted to the place for the basest purposes.

Our last accounts mention that the Hooghly had sailed for England with 6,643 ounces of gold, besides which, there were 60,713 ounces in the assay office. Taking into account the quantities previously shipped, we have a grand total of 728,847 ounces produced in this colony alone, and worth, at the London rate of £4 per ounce, no less than £2,915,000. This statement, it must be remembered, does not include the amounts that remained in the hands of the diggers or others, nor the large quantities of gold sent by the overland escort to Adelaide. At this last-named town we have advice of the receipt of £811,000 worth of the precious metal, (valued only at the local price of seventy-one shillings per ounce.) These returns are the latest yet received, and afford some idea of the extensive character of the gold production in the colony of Victoria.

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